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# Representing, Disseminating, and Debating Controversial Bioethical Issues in Popularised Discourse

Edited by Giuseppe De Riso, Roxanne Barbara Doerr and Giuliana Garzone

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# Popularised Discourse and/on Bioethics: An Introduction

## 1. Discourses of and on Bioethics

In the last few decades a variety of bioethically-relevant issues have been at the centre of public debate, attracting ample coverage from the media in a context where unprecedentedly fast and pervasive scientific and technological progress has led to new questions on the actual application of advances to real life cases, e.g. in biotechnologies, genetics, medicine, with an impact on human identities, relations and practices, and therefore effect on human rights and fundamental freedoms. This special issue of *Anglistica AION* on *Representing, Disseminating, and Debating Controversial Bioethical Issues in Popularised Discourse* focuses on the discursive representation of such issues in popularising texts. It owes its core idea to the main theme of investigation of the Milan research unit – the representation of bioethical issues – co-ordinated by Giuliana Garzone as part of a National Research Programme on knowledge dissemination.[1] In particular, attention is centred on the linguistic and discursive strategies that are employed in 'translating' and framing specialised bioethical notions, terms and debates within journalistic, online, promotional, corporate and legal texts, and media coverage.

While the literature on the strategies enacted in knowledge dissemination and popularisation in general has grown exponentially over the past few years, the texts and discourses that are deployed in the popularisation of bioethical themes have received much less scholarly attention in linguistic and literary studies, in spite of the prominence and discursive complexity of communication on bioethical themes. This special issue therefore aims at filling this research gap by specifically focusing on the reframing of bioethically sensitive issues by popularising writers and by public and private institutions through determined language, genres and channels on a large scale, and providing an overview on potential manners to influence public opinion and socio-cultural debates. In fact, it is all the more essential for linguistic, literary and cultural studies dealing with bioethical issues to detect all possible linguistic, discursive and rhetorical alterations and imbalances that might lead to inaccuracies, especially when they involve ideological manipulation or slant, and identify the linguistic and discursive transformations that bioethically relevant and sensitive knowledge may be consciously or unconsciously subjected to in the course of the dissemination process by individual writers, institutions, professions, organisations or corporations.[2]

[1] Research programme "Knowledge dissemination across media in English: continuity and change in discourse strategies, ideologies and epistemologies" financed by the Italian Ministry of Education, University and Research (PRIN 2015TJ8ZAS).

[2] Among the innumerable studies on popularisation in general, see Greg Myers, "Discourse Studies of Scientific Popularization: Questioning the Boundaries", *Discourse Studies,* 5.2 (2003), 265-279, and all the articles collected in Vol 5.2 of *Discourse*

As a preliminary step to illustrate the broad conceptual and methodological framework underlying the studies collected in this issue, it is useful to refer to Art. 1 of UNESCO's *Declaration on Bioethics and Human Rights* (2005), where bioethics is described as embracing "the ethical issues related to medicine, life sciences and associated technologies as applied to human beings, taking into account their social, legal and environmental dimensions" (Art. 1). This definition, which shapes the themes to be explored in this special issue, sets a rather broad topical range.

In the field of linguistics and discourse analysis, research on so broad a spectrum of themes has been further enriched through a necessary expansion of its inquiry into the fields of literature, cultural studies and higher education, as attested by some of the essays collected in this special issue. This reflects the undeniable fact that bioethical issues are at the centre of political, legal, and cultural debates at a global level,[3] especially in the aftermath of unprecedented legal and ethical scenarios opened up by the recent pandemic and of high profile cases resulting in pioneering institutional and legal provisions.

In terms of areas of investigation, the papers in this issue fall within the purview of what Stephen G. Post sees as the two main thematic "lineages" from which modern bioethics developed: "the important moral questions surrounding developments in healthcare, medicine, research, and the professional/patient relationship" on the one hand and, on the other hand, concerns that "emerged from biologists who felt obliged to address the moral meaning of the biosphere, and to reflect on the remarkable implications of their discoveries and technological innovations".[4]

## 2. The Bioethics Perspective

Most of the articles included in this volume explore one of a diversified range of topics within these two areas, dealing with the representation of issues that are broadly associated with ethics in medicine and ethics in the life sciences. The only exception is Giuseppe De Riso's essay which has an essentially literary focus, taking Salman Rushdie's *Midnight's Children* (1981) as an example of bioethical narrative. It applies the notion of bioethics to the analysis of fiction, seeing narration as a bioethical effort that assumes a clinical epistemology demanding the participation of both storyteller and readers, who become progressively aware of the relativity of the human comprehension of individual and social experience.

*Studies,* edited by Greg Myers; Giuliana Garzone, *Perspectives on ESP and Popularization* (Milan: CUEM, 2006); Giancarmine Bongo and Giuditta Caliendo, eds., *The Language of Popularization/Die Sprache der Populisierung* (Bern: Peter Lang, 2014); and Giuliana Garzone, *Specialized Communication and Popularization in English* (Rome: Carocci, 2020).

[3] See among others Jerry Menikoff, *Law and Bioethics: An Introduction* (Washington DC: Georgetown U.P., 2001); Marcus Düwell et al., eds., *Bioethics in Cultural Contexts: Reflections on Methods and Finitude* (Dordrecht: Springer, 2006). Among recent books on bioethics in medical practice, cf. Brown Caruso et al., eds., *Bioethics, Public Health, and the Social Sciences for the Medical Professions: An Integrated, Case-Based Approach* (Dordrecht: Springer, 2020); Joris Gielen, ed., *Dealing with Bioethical Issues in a Globalized World: Normativity in Bioethics* (Dordrecht: Springer, 2020).

[4] Stephen G. Post, "Introduction", in *Encyclopedia of Bioethics,* Third edition, Vol. 1 (Farmington Hills, MI: Thomson Gale, 2003), xi.

What emerges clearly from this paper is that looking at facts and issues through the lens of bioethics means evaluating their legitimacy and merits, and reflecting on the responsibilities pertaining to them. In this process, language and discourse play a very important role: this is the main focus of the other articles in this special issue, which mainly deal with problems having to do with the application of science and technologies. In fact, while scientific and technological research and experimentation work to promote innovation and offer new opportunities, the humanities maintain their role in expounding the outcomes of such research under an ethical perspective for the benefit of institutions and of the general public by considering emotional, psychological, geopolitical and societal factors. They also play a role in productively communicating policies, possibilities and potential issues and hypotheses, and in many cases in framing legal concepts and principles like proportionality and personhood[5] and the power of agency of the professionals and stakeholders that are involved.

Especially interesting from this viewpoint are the recent and dramatic advances in all fields of the biomedical and life sciences which have offered mankind unprecedented and previously unimaginable abilities to tamper with processes that, until not long ago, were totally beyond our control (e.g. artificial reproduction, end of life care, cloning, etc.). As new cutting edge techniques are made available, the problem arises of whether and how such techniques can and should be used: what are the limits? Can we go beyond them? How is the debate over these issues framed in linguistic and discursive terms? This is dealt with in the first group of papers in this issue which look at the representation of "hot" topics in contemporary public debate: primate cloning and the possibility of cloning humans (Giuliana Garzone), gene editing (Jekaterina Nikitina), cryopreservation as a technology to prolong life with a view to future resuscitation (Kim Grego), and facial recognition, encroaching on people's right to privacy (Maria Cristina Paganoni). Whether directed towards the promotion of new services based on pseudo-science (as in the case of cryonics) or aimed at informing the general public about new procedures for the purpose of disseminating knowledge so that people may form an opinion on innovations, as in the cases of coverage in the periodical press in Garzone's, Nikitina's and Paganoni's articles, what emerges here is that in order to form an opinion and take a stance the layman is inevitably and totally dependent on the popularisation – indeed, vulgarisation – of advanced and innovative technologies and procedures. Popularising genres especially enable practitioners' and participants' ideological stances regarding innovative and controversial decisions and practices to be communicated, and supported or opposed, in an open and accessible arena.

If the orientation of people's perception of far-fetched scientific and technological innovations is a critical issue, what emerges as even more critical is how the general public is informed about practices concerning medical ethics or bioethics, especially in cases where the possibility of relying on accurate information may be crucial in people's or practitioners' decisions.

This is the case, for instance, of texts used to obtain patients' informed consent, as discussed in Zanola's paper, or the categorisation of any given disorder, which is examined in Francesca Santulli's paper focusing on the description of Disorders of Neurodevelopment in the authoritative *Diagnostic*

[5] Alexander Morgan Capron and Vicki Michel, "Law and Bioethics", *Loyola of Los Angeles Law Review*, 27.25 (1993), 25-40, 32.

*and Statistical Manual of Mental Disorders*. Also, the discursive framing of health issues in the press may have an impact on the consideration given on a personal, societal and political level to problems such as drug abuse and performance enhancement in sports as a result of their representation and framing in the press, as outlined respectively in Giorgia Riboni's and Dermot Heaney's articles.

While bias in popularisation strategies is often present but not overtly deployed in journalistic and institutional communication, it is rife when popularisation is aimed at the market, as discussed in Walter Giordano's paper on the advertising of pharmaceutical products, and in Cinzia Giglioni's essay on apologetic strategies in press releases issued by a Big Pharma company to justify its drug pricing policy.

If in the first part of the special issue the focus was mostly on bioethical issues in the health and medical sphere, with the following papers the focus shifts to the environment, instantiating what Post sees as the second important line of development of modern bioethics, i.e. the life sciences. The two papers included in this section look at environmental issues from two opposite viewpoints: Paola Catenaccio explores the argumentative strategies relied on by major players in the agro-biotech sector to legitimate their operations and the technologies upon which they are based, while Emanuele Brambilla looks at the discursive conventions of environmental activist cultures. In both cases, discursive strategies are strongly oriented towards influencing public opinion and are therefore highly manipulative.

The issue closes with two papers that look at texts aimed at shaping the medical practitioner's attitude toward bioethical issues, respectively guidelines for doctors (the Defense Health Board's *Ethical Guidelines and Practices for US Military Medical Professionals*) in Roxanne Barbara Doerr's article, and texts used in a series of scientific communication workshops to introduce postgraduate Biomedical and Medical Science education in Karen Dwyer's article.

## 3. Final Remarks

The picture that emerges from this collection of articles is one of extreme complexity, which reflects on the one hand the great diversity of the issues included under the "bioethics" label, and on the other hand the complex discursive strategies deployed to disseminate knowledge on the most sensitive issues in contemporary society, both due to the difficulty and the complicacy of the notions to be popularised, and the bias that is often conferred upon the relayed information.

Another aspect that emerges from the studies in the present issue is that the original four principles of bioethics introduced by Beauchamp and Childress (1979/2001) and upheld in medical ethics (autonomy, beneficence, non-maleficence and justice) are not monolithic and indisputable but, as they have been constructed, could be deconstructed and reconstructed not only based on cultural but even professional contexts. In fact, highly specialised professionals who are the first to have to respond to emergencies, dilemmas and demands having bioethical implications are often the first to realise that a reframing of procedures and guidelines is in order to face these challenges. On their part, academic scholars observe that linguistic analysis, literary reflection and didactic debate may pave the way

towards non-experts' better understanding of highly complex and life-changing phenomena and knowledge when people fear that the application of new scientific experiments and findings could impinge on human rights and the dignity of – and responsibility for – birth, illness, performance, privacy, personhood and death, as well as the integrity and well-being of the environment and the flora and fauna that populate it and also need to be protected.

## 4. Contents of the Special Issue

The issue starts with Giuseppe De Riso's analysis of the 'medical epistemology' employed by Salman Rushdie in *Midnight's Children*, his first novel and a masterpiece in postcolonial literature. Rushdie's clinical concerns rely on a metanarrative confusion of invention and reality which cunningly interrogates how cultural and biological knowledge is transmitted in the contemporary world, and expresses the author's artistic preoccupations for the ethical implications of such spreading.

The subsequent essays are divided into five sections. The first one, "Beyond limits: ethical dilemmas", is introduced by Giuliana Garzone, who deals with the ethical implications of cloning, one of the most heated subjects in the public debate on bioethics. More specifically, she looks at the discursive procedures employed in a corpus of worldwide news articles illustrating the implications of the successful cloning of two macaque monkeys in 2018, as well as their attempt at favouring the public's acceptance of such a controversial event in light of rising concerns. This is especially relevant if one considers that the frequent inaccuracies contained in the articles denounce a deontic issue in the way the news was reported by professional journalists. Drawing on the methodological framework of Corpus-Assisted Discourse Analysis, Jekaterina Nikitina looks at the selective, yet careful, representation of gene-editing in British tabloids and broadsheets in 2017 and 2018, both from a linguistic and discursive point of view, through news reports which could influence public opinion. Kim Grego follows suit with an essay considering the dissemination of scientific information about cryonics services, meant to preserve bodies after death and bring them back to life at a later time in the expectation that technology may one day allow so. Grego argues that such technology is ambiguously marketed as if it were not bioethically relevant, and on an often negotiable notion of death which may result in misled choices about life or death by consumers. Maria Cristina Paganoni closes this section with a contribution to the sensitive debate about the impact of facial recognition technology and related software by noting the contrast between the fervent narrative of technological progress adopted by the AI industry, and the more cautious approach of news media on the more questionable aspects of the ethical implications of the man-machine configurations that are involved in facial recognition technology.

Annalisa Zanola opens the second section, "(Bio)ethics and health issues", taking an approach both diachronic and synchronic to informed consent to scrutinise how it is valued by patients in terms of satisfaction and anxiety. In finding a way to assure that informed consent is clearly understood by patients, as it lies at the crossroads of lay, scientific and legal discourses, Zanola suggests that researchers should be aware of the laws which actually enforce the ethical implications of informed consent in any given context. The ideological implications behind the notions of norm and disease is the object of interest of Francesca Santulli who, describing moving in the area of Disorders of

Neurodevelopment, points out the difficulties of adopting a model capable of identifying 'normal' behaviour in light of each person's specificities. Giorgia Riboni presents an analysis of the debate on opioid addiction in the United States and the clear shift in its representation in newspapers from a criminalization to a medicalization framework, with a resulting change in proposed solutions from punitive to medicalized treatment. Dermot Heaney adopts a Computer-Assisted Discourse Studies approach to compare the evaluation strategies present in a corpus of hearings about the doping investigations which occurred during 2016 and 2017, after it was revealed that such practice was indeed very common in British sport, with a corpus of online media coverage. Heaney thus manages to attest the close relationship between politicians and the press and recognises the debt of political committees to media exposure as far as incidence in public life is concerned.

Walter Giordano and Cinzia Giglioni provide the two contributions which make up the third section of the present issue, "Bioethics, health and the market". Giordano focuses on a corpus of over seventy commercials advertising several drugs authorized by the Food and Drug Administration in the USA to analyse discourses influencing the knowledge of diseases, access to information about drugs and the interaction between patient and physician. There emerges a reduction of the physician's responsibility, a part of which is loaded onto the shoulders of patients. As a consequence, they are expected to have a more active role in becoming informed on their condition, the appropriate drug to treat it and its side effects. Instead, Giglioni deals with the press releases that the pharmaceutical company Mylan has issued to counter the strong criticism it had to face in 2016 for hiking the price of one its most sold drugs. In highlighting the link which financially solid companies create with abstract values correlated to bioethical ethics, Giglioni is able to single out bolstering as the main communicative strategy used in their annual reports as an apologetic strategy to improve the public perception of the company.

"Bioethics and the environment" is the title of the fourth section of the issue. In it, Paola Catenaccio explores the concealment of the argumentative, self-legitimising strategies employed by major players in the agro-biotech sector in order to justify their operations and technologies. Such strategies rely not on hiding problems, but on their benefits and advantages for the human environment, thus making it more difficult for critical opponents to raise uncomfortable questions. Dissemination strategies are also central in Emanuela Brambilla's dissertation on three tune guides issued in Australia, Italy and the USA by Greenpeace with the aim of influencing the behaviour of tuna consumers. A close inspection of such guides allows Brambilla to reveal that the necessity to face global bioethical crisis is central in the creation of narratives which, by targeting specific national audiences, manage to raise local action, thus effectively overshadowing the unethical practices of certain tuna brands.

The fifth and concluding section on "Bioethics guidelines and instruction" opens with a study by Roxanne Barbara Doerr, who has recourse to Critical Discourse Analysis (CDA) in order to investigate the vagueness of medical ethics as expressed through the dissemination of information regarding medical professionals belonging to the military community, as well as the bioethical contradictions and struggles lying therein. The special interest towards this category derives from its subjects' ambiguous and unstable positioning on the line between their Hippocratic vocation to take care of others and the oppressive practice of military culture. In addition to CDA, Karen Dwyer also

draws on Foucauldian Discourse Analysis to analyse how debates about medical cannabis have influenced drug use and perception, as well as medical cannabis policy. This may reveal a possible way to incorporate Discourse Analysis into Biomedical and Medical Science Education and help students gain a deeper understanding of bioethical issues.

Giuseppe De Riso

# Ethical Responsibility in *Midnight's Children*. Clinical Storytelling as a Form of Biological and Cultural Survival

**Abstract**: The present essay discusses the bioethical concern in the narration of Salman Rushdie's *Midnight's Children* (1981). The multiple Booker Prize winning novel has been acknowledged as one of the prominent literary works of the past century, and a major source of critical inquiry, especially for Postmodern and Postcolonial criticism. Yet, not much has been said about the interpretative strategies on which narration relies to convey its meanings, especially with regard to the novel's ethical and moral concern for the transmission of knowledge, be it biological or cultural. The present paper tackles this aspect of Rushdie's masterful work by discussing how the literary connection between Saleem's fictional world and the history of India represents a strategic confusion of different narrative and historical planes. Among the effects of this literary operation is the overlapping of Saleem's family with his siblings of the midnight, which results in Saleem's progressive disillusionment with the idea of familial belonging based on blood ties to embrace, in its place, an elective affiliation as theorized by Edward Said. This comes from the awareness that emotional bonding is the only true source of ethical responsibility towards one's own community and its future generations. Following Judith Butler, his biographical recount can thus be seen as metanarratively concerned with establishing a bond with the reader through what will be defined here as 'clinical storytelling', a very peculiar style based on a medical epistemology embedded in the magical realist tone of the novel, whose unreliability appears to be especially effective in raising and exploring ethical questions about literary authorship, storytelling and cultural transmission.

Keywords: *cultural transmission*, *disease*, *ethics*, *intertextuality*, *magical realism*, *remembrance*, *storytelling*

## 1. The Ethics of Narration: The Problem of the Origin of Responsibility

Drawing on reflections on the relationship between storytelling, ethics, and clinical medicine[1] the present article is concerned with Salman Rushdie's *Midnight's Children* (1981) as an example of bioethical narrative in that it provides purchases for reflections about the relevance of both historical and fictional narrative in moral life.[2] Through ideas of familial and elective relationships, the novel foregrounds a metaliterary, constitutive reciprocity between history and fiction, between literary characters and real circumstances. Tracing the moments where such bonds emerge within the novel,

[1] For an in-depth analysis on the subject see Mikhail M. Bakhtin, *The Dialogic Imagination: Four Essays* (Austin: University of Texas Press, 1981); Walter Benjamin, "The Storyteller: Reflections on the Works of Nikolai Leskov", in Hannah Arendt, ed., *Illuminations: Essays and Reflections* [1936], trans. by Harry Zohn (New York: Schocken, 1968), 83-109; Alex M. Carson, "That's Another Story: Narrative Methods and Ethical Practice", *Journal of Medical Ethics*, 27.3 (2001), 198-202; Tod S. Chambers, "From the Ethicist's Point of View: The Literary Nature of Ethical Inquiry", in manuscript; Hester D. Micah, "Narrative as Bioethics: The 'Fact' of Social Selves and the Function of Consensus", *Cambridge Quarterly of Healthcare Ethics*, 11.1 (2002), 17-26.

[2] Robert Coles, "Medical Ethics and Living a Life", *New England Journal of Medicine*, 301.8 (1979), 444-446; Augustus S. Wilkins, ed., *The Ars Poetica of Horace* (New York: Macmillan, 1960); Edward M. Forster, *Aspects of the Novel* (New York: Harcourt, Brace, 1927); Anne H. Jones, "Literature and Medicine: Narrative Ethics", *Lancet*, 349.9060 (1997), 1243-1246.

the following analysis will focus on the literary strategies and devices that reveal an authorial or narrative preoccupation with how to pass on factual, anecdotal and moral knowledge, not just through the themes and characters described, but also by virtue of the required interpretative reasoning.[3] For this purpose, Rushdie skillfully sets up a narrative context relying on the qualities of what will be called here 'clinical storytelling', a narrative method which allows its author to negotiate between the discovery of what is authentic in human experience and those concepts and expectations which, instead, are socially constructed or culturally mediated.[4] Touching upon major social events in India's history, such as continental wars, religious conflicts and, even more importantly, the Emergency of the mid-Seventies, the 'disease' which affects Saleem Sinai, the main character of *Midnight's Children*, allows the reader to act like a physician or practitioner and to imaginatively explore the limits of the meanings conveyed, as well as tackle important questions of authorship, storytelling and responsibility.

To understand the implications of this process, it is vital to describe the connection that binds Saleem to his nation. As is widely known, Saleem is a 'midnight's children', that is one of the 1001 people who were born during the hour immediately following the midnight of 15 August 1947. It was the moment India gained its long sought-after independence from Britain. As per Saleem's own account, all the children who were born right after that fateful hour were special children, endowed with supernatural powers. The closer they were born to midnight, the greater the power they possessed. Saleem's birth happened exactly at midnight (as was the case for his alter ego, Shiva). For this reason, he possesses the mightiest power of all, a sort of telepathy with which he can hear people's thoughts. Even more important than this, he can speak in their minds, make himself be heard within them, as well as bring two or many more minds together. He can act as a chat-room or web-conferencing of sorts, allowing a telepathic synchronous interaction among people who can communicate and interact with each other while being physically separated. The distance does not matter, as far as Saleem is on Indian soil. If he goes out of India, his power is lost. It is the idea or feeling of 'being in' India which allows him to bring together what he would later come to consider his extended family, the midnight's children, in meetings that are referred to in the novel as the Midnight's Children Conference. He hopes to close the gaps and the distances among them so that they can organize themselves and synergistically use their special abilities to improve the condition of their nation. From this perspective, the fact that they were born together 'with' India represents a special thread connecting all of them as siblings.

> With that immodest proposal the novel's characteristic tone of voice, comically assertive, unrelentingly garrulous, and with, I hope, a growing pathos in its narrator's increasingly tragic over-claiming, *came into being*. I even made the boy and the country identical twins.[5]

[3] Jerome S. Bruner, *Acts of Meaning* (Cambridge, MA: Harvard U.P., 1990).

[4] Howard Brody, *Stories of Sickness* (New Haven, CT: Yale U.P., 1987), as well as the work he published in 2002 with the same title (New York: Oxford U.P.); Tod S. Chambers, "The Bioethicist as Author: The Medical Ethics Case as Rhetorical Device", *Literature and Medicine*, 13.1 (1994), 60-78; Rita Charon, "To Render the Lives of Patients", *Literature and Medicine*, 5 (1986), 58-74; from the same author, "The Patient-Physician Relationship: Narrative Medicine. A Model for Empathy, Reflection, Profession, and Trust", *Journal of the American Medical Association*, 286.15 (2001), 1897-1902.

[5] Salman Rushdie, *Midnight's Children* (London: Vintage Books, 1981), 10. The version consulted here is the e-book available on the Google Play Store. Emphasis mine.

The midnight's children might not be united by blood ties, but they were a family nonetheless thanks to their simultaneous birth with the nation. The historic coincidence gave them great expectations of a bright future. For example, Saleem recounts that the Bombay newspaper *The Times of India* made it known from its columns that it would give a monetary prize to any women giving birth exactly at midnight. The first Prime Minister of the new nation, Jawaharlal Nehru, saw those children as a prosperous sign of the future of the new nation, children which India would undertake to protect as a way to grant prosperity to its own destiny. The Midnight's Children were prophesied, expected and celebrated by Indian institutions, media and, more generally, by history, as the embodied manifestation of the new nation. Their future and wealth identified with the future and wealth of India. And Saleem, for one, feels all the pressures and the responsibilities that such a circumstance brings about.

The literary bond narratively established by Rushdie connects Saleem with a historical entity which is by definition plural, made of about 630 million people.[6] Rushdie's narrative plays on this special connection which history traces between Saleem and the nation understood as an imagined community[7] made up by the lived experience of the bodies inhabiting it. The author strives at all times to highlight the connection between culture and bodies, the interactions between abstract and material domains. This is true not just for *Midnight's Children*, but for four of his first major novels.[8] Rushdie's effort consists in making the reader grasp the mutual constitutive reciprocity between interfering fields of experience and knowledge, which are not hierarchically arranged on a vertical ladder of subjection or determination. While Cultural and Postcolonial Studies have engaged in an enduring battle to dispel the illusion by which cultural notions are made to appear 'natural' or 'unavoidable' by rooting them in biology and nature through repeated socially-sanctioned bodily performances, the misunderstanding by which bodies and lives may then be considered as purely the result of culture and discursive practices is still all too common.[9] From this perspective, Rushdie reveals an exceptional historical intuition in his setting up a narrative context in which characters and their bodies possess a special link to India's history and its population. In fact, from a narrative point of view, they are meant to function as more than metaphors or symbols of India.

The idea that a fictional character and a nation may be identical twins is realized in many ways in the novel and has been deeply discussed and studied.[10] Yet, it is the connections that exist between Saleem, India, the midnight's children and all of the Indian people that are at the centre of Rushdie's novel and of the present reflection, as they weave complex networks of relationships which elicit

[6] During the years following Independence and in which Saleem's story develops.

[7] To use the well-known expression employed by Benedict Anderson. See Benedict Anderson, *Imagined Communities: Reflections on the Origins and Spread of Nationalism* (London & New York: Verso, 1991).

[8] *Shame* (1983), *The Satanic Verses* (1988), *The Moor's Last Sigh* (1995) as well as *Midnight's Children*.

[9] For an overview on this topic see Judith Butler, *Excitable Speech: A Politics of the Performative* (New York and London: Routledge, 1997); Butler, *Undoing Gender* (New York and London: Routledge, 2004); Butler, *Notes Toward a Performative Theory of Assembly* (Cambridge, Mass: Harvard U.P., 2015); Butler, *The Psychic Life of Power: Theories in Subjection* (Stanford: Stanford U.P., 1997); Butler, *Dispossession: The Performative in the Political. Conversations with Athena Athanasiou* (Cambridge: Polity Press, 2013); Julia Kristeva, *New Maladies of the Soul*, trans. by Ross Guberman (New York: Columbia U.P., 1995); Kristeva, *Strangers to Ourselves* (New York: Columbia U.P., 1991).

[10] See among others Robert Eaglestone and Martin McQuillan, *Salman Rushdie: Contemporary Critical Perspectives* (London, New Delhi, New York, Sydney: Bloomsbury Publishing, 2013); Sabrina Hassumani, *Salman Rushdie: A Postmodern Reading of His Major Works* (London: Associated U.P., 2002); Neil Ten Kortenaar, *Self, Nation, Text in Salman Rushdie's* Midnight's Children (Montreal & Kingston, London, Ithaca: McGill-Queen's U.P., 2005).

questions of care and responsibility with profound moral and bioethical implications. What may be considered still somewhat lacking in contemporary critical accounts of the novel is an analysis of the literary processes and devices through which these connections are established. Once we acknowledge them, they also raise profound ethical questions concerning family and birth, chance and opportunity, memory and forgetting.

The first necessary step is to consider that *Midnight's Children*, as Rushdie himself would write in an introduction to the novel years later,[11] was occasioned by the necessity to give narrative form to his childhood memories of Bombay. Also, the very character of Saleem Sinai did not come from his imagination, but from his memory. In fact, the figure of Saleem was present in a draft of an earlier novel:

> I had wanted for some time to write a novel of childhood, arising from my memories of my own childhood in Bombay. Now, having drunk deeply from the well of India, I conceived a more ambitious plan. I remembered a minor character named Saleem Sinai, born at the midnight moment of Indian independence, who had appeared in the abandoned draft of a *still-born*[12] novel called *The Antagonist*. (10)

Saleem comes from Rushdie's childhood memories, but those memories refer to a fictional character, they do not belong to Rushdie himself. The memories are real, what they refer to is not. Thus, while the genesis of the novel is concerned with the memories of a child, the peculiar relationship which Rushdie establishes between himself and a fictional child, who is in turn a dead foetus in a just-imagined, "still-born" (10) literary text, produces complex echoes within the novel. This is especially true if one takes into account the fact that the child comes to somehow 'mirror' the whole of India, considered both as a newborn nation and, at the same time, as the dead project, the interrupted dream of the ex-coloniser.

Just as the main protagonist of *Midnight's Children*, his never-to-be precursor should be born at the midnight in which India stopped being a British colony. Bonds are thus created between Rushdie, as an author, and Saleem as both a product of his imagination and a shard of his memory. These, in turn, are mirrored by Saleem (as Rushdie's alter ego) and India with all its people. Taken together, they reveal Rushdie's preoccupation with the relationship between the real and the imaginary, the physical world and the realms of imagination, between an author, his characters, and the world they inhabit (both fictional and historical). Rushdie's main concern is to problematize the relationship between truth and falsehood, blurring the line separating every opposing binarism in between them. When he makes it clear that the whole of modern Indian history is Saleem's fault, his intent is to make sure the reader understands that Saleem and India are connected by a bond which is not just literary, fictional or imaginary:

> As I placed Saleem at the centre of my new scheme I understood that his time of birth would oblige me immensely to increase the size of my canvas. If he and India were to be paired, I would need to tell the story of both twins. Then Saleem, ever a striver for meaning, suggested to me that the whole of modern Indian history happened as it did because of him; that history, the life of his nation-twin, was somehow all his fault. (10)

[11] Rushdie, *Midnight's Children*, 9-17.
[12] Emphasis mine.

There are different questions that spring naturally from such a revelation. First of all, how is it possible that Saleem, a fictional character, can have any tangible consequences in the real world for half a billion of living and breathing bodies? By using the noun 'fault', Rushdie seems to suggest that Saleem's unsuccessful attempt to save the Indian nation in the novel could help explain the outcomes of modern India, which his author evidently deems disastrous, if not worse. Secondly, what exactly did he do wrong and how is he responsible for such mistake(s)? And, if that's the case, why should Saleem only be at fault here, and not his own author as well? Rushdie's words would imply a total loss of responsibility on his part, laying the blame on his character, as if he enjoyed total freedom of agency with respect to his author, whose role would just be that of a passive storyteller, impotently registering situations, actions and emotions. It is my contention that the ethical implications of the narrative form adopted by Rushdie may point at a possible path of inquiry in trying to cope with those questions.

Saleem confesses that his narration is determined by the 'symbiotic' relationship with his country, to which he is tied by an umbilical cord. The images he provides are especially relevant linguistic choices, as they convey the binding of the metaphorical and the biological:

> what had befallen me in that benighted moment, because thanks to the occult tyrannies of those blandly saluting clocks I had been mysteriously handcuffed to history, my destinies indissolubly chained to those of my country. For the next three decades, there was to be no escape. (21)

He is 'handcuffed' to history by inscrutable forces which chain his biological destiny together with that of his country. The idea here is to create a bond, a 'tethering' or coupling. Also, it must not be forgotten that when India was born, recognized as a historical entity, it too had a twin sister nation from which it was parted at birth: Pakistan. As a matter of fact, the new country (which was conceived as a home for Muslims) plays a great role in the life of Saleem.

Once this connection has been established, Saleem's motivation for narrating his story derives from his awareness of imminent death. Even though he is in his early thirties, he feels he is about to die. The peculiar relationship between Saleem and India makes Saleem undergo a process of disgregation. His body shows the signs of an accelerated decay bound to lead him to inevitable demise. Saleem is "falling apart at the seams" (61) since "the cracks and always the cracks are narrowing my future towards its single inescapable full point" (555). He is literally crumbling, falling to bits, each bit or crumble representing an Indian citizen:

> Please believe that I am falling apart. I am not speaking metaphorically; [...] I mean quite simply that I have begun to crack all over like an old jug [...]. In short, I am literally disintegrating, slowly for the moment, although there are signs of acceleration. I ask you only to accept [...] that I shall eventually crumble into (approximately) six hundred and thirty million particles of anonymous, and necessarily oblivious dust. (61)

As Raita Merivirta[13] notes, impending doom or fatal moment turns remembrance into an ethical responsibility for Saleem as a narrator. He had grown up with a will to change things for his nation,

[13] Raita Merivirta, *The Emergency and the Indian English Novel: Memory, Culture and Politics* (New York: Routledge, 2019).

influenced by the expectations grown out of the extraordinary coincidence between the birth of India and his own. He cares for his people but, as the body cracks, memory too risks cracking in an unrecoverable way. Narration thus becomes a matter of time, and remembering a responsibility for the benefit and survival of the other people within the country. The very same existence of the Midnight's Children Conference was aimed at serving the nation.

From the moment Saleem is born, the novel seems launched in a race towards another fateful moment, as important as India's independence itself. The Emergency of 1975-76 represented a collapse of Indian democratic apparatuses, which revealed the insurmountable contradictions of a social tissue heavily based on caste discriminations and prejudices. Saleem defines this period as "a time which damaged reality so badly that nobody ever managed to put it together again" (604). When Saleem starts his tale, Indira Gandhi had just recently regained her power through rigged elections. This is seen as an almost cataclysmic event by both Rushdie and Saleem. At the time of Saleem's writing, the papers were talking "about the supposed political *rebirth*[14] of Mrs Indira Gandhi" (555), after being considered politically finished. The crimes she had committed during and before the Emergency, which is inevitably the last major Indian historical situation Rushdie could possibly describe in the novel, were being ignored by official historical accounts, and the country was rapidly forgetting, sinking into amnesia. The scar Indira had inflicted on India's body, while unrecoverable, was being cancelled not through healing, but simply by being erased from collective memory and forgotten. Saleem thus feels the urge to remember and write his story, since it is also the story of his country, his "twin-in-birth" or "subcontinental twin sister" (Ibid.).

After the failure of the Midnight's Children Conference during the years of the Emergency, Saleem is compelled to remember for others to know. In the words of Emile Pine, ethical remembering is thus a 'political' remembering as far as it is aimed at social justice:

> In public terms, one of the central moral elements of the act of memory is that cultural remembrance can act as a catalyst for social openness.... Memory can thus function as an ethical act, a moral duty that we exercise. Indeed, the concept of memory as an ethical act makes it our duty to remember. The goal of ethical memory is a form of justice that recognises the political nature of remembering and forgetting.[15]

Paul Ricoeur has delved into the notion of collective memory by stating that "the duty to remember consists not only in having a deep concern for the past but in transmitting the meaning of the past events to the next generation".[16] The risk is, in fact, that in passing from subject to subject, from medium to medium, from account to account, memory could be erased or distorted. Saleem himself admits that in order to remember he has to fight "past fissured blanks" (560).

The ethical concern in the novel emerges precisely out of the constant negotiations Saleem, as storyteller, carries out between reality and invention, fact and fiction. This is apparent from the beginning: Saleem asks his readers to accept an almost supernatural truth which is incompatible with a biological organism made of flesh and blood. He is cracking, he assures the reader, like an old jug or,

[14] Emphasis mine.
[15] Emilie Pine, *The Politics of Irish Memory: Performing Remembrance in Contemporary Irish* (New York: Palgrave Macmillan, 2011), 13-14.
[16] Paul Ricoeur, "Memory and Forgetting," in Richard Kearney and Mark Dooley, eds., *Questioning Ethics: Contemporary Debates in Philosophy* (New York: Routledge, 1999), 9.

more appropriately, like the streets of India under the scorching sun. There is this curious mixture of organic and inorganic properties in Saleem as a narrator which makes him immediately and extremely complicated to disambiguate. He is simultaneously more and less than human, contaminated with properties which come from objects and places of India making up his body literally and not only metaphorically. Saleem and India contaminate each other, exchange vital genetic heritage or defining properties: Saleem is somehow more than just a metaphorical representation of India, while India can become a character, a somehow human one, embodied in Saleem. The process is of mutual constitutive influence: a 'kinship' working on metaphorical and biological planes at one time.

By mirroring Saleem's birth with India's, Rushdie confounds the narrative unity between plot and story. It becomes much more difficult to establish a chronologicity or consequentiality in the developments of events. It is not immediately apparent what begets what, and the reader cannot trace unambiguous relations of cause and effect between events and rationales, whose developments zigzag between the imaginary planes of fiction and historical reality, making them resonate one into the other. Like the kind of disruption of linearity discussed by Paul Ricoeur,[17] narration increases the scope and complexity of the different situations described by having them unfold on numerous time planes. The characters' motivations and understanding are blended with the political history of the Indian and Pakistani nations such that any moral understanding or exploration is entangled with an almost countless number of historical, fictional, and authorial variables. It becomes almost impossible to find one's narrative bearings or unmistakeable points of origin in time. As a result, interpretation is made difficult by the way meaning is constructed and then scattered. It is from this perspective that Rushdie's narrative style could be seen as an act of ethical engagement, as it tries to cope with the kind of mutual influences literature and history exert towards each other, while posing the question of how to deal with and transmit the knowledge that is produced in the ambiguous interaction between the two.

Saleem himself admits that his memory is already lacking and that his own narration contains mistakes or gaps. Saleem wants the reader to accept that memory may also have left a space open for invention. He has no presumption of providing an absolutely accurate representation of reality, but welcomes distortions and aberrations of the mind. The admission of unreliability, of an uncertain boundary between reality and invention, far from undermining the authorial recount, gives it more strength. It reveals a storyteller who is fully aware of the power of memory and its misuses, as well as of the importance of the adoption of a proper form of narration. In the words of Jack Kugelmass: "The moral order requires memory and memory in turn demands certain narrative forms".[18] The creative act of remembrance is especially meaningful if one takes into account the fact that Saleem himself is an unborn character drawn out of Rushdie's memory. Rather than choosing a historical character to give more credibility and sense of accuracy to the account of Indian social and political developments, Rushdie chooses the memory of somebody who never lived in the first place, believing that even who or what existed still only virtually (as pure potential) has an impact in human affairs:

[17] Paul Ricoeur, *Time and Narrative*, trans. by Kathleen McLaughlin Blamey and David Pellauer (Chicago: University of Chicago Press, 1988).

[18] Jack Kugelmass, "Missions to the Past: Poland in Contemporary Jewish Thought and Deed", in Paul Antze and Michael Lambek, eds., *Tense Past: Cultural Essays in Trauma and Memory* (London and New York: Routledge, 1996), 192.

> How hard to pin down the truth, especially when one is obliged to see the world in slices; snapshots conceal as much as they make plain. All stories are haunted by the ghosts of the stories they might have been.[19]

In *Midnight's Children* there is a kind of kaleidoscopic effect whereby symmetric binarisms reflect each other and are spectrally doubled by the ghosts or phantasms of what could have been but never was. Following Allen Graham,[20] Rushdie's writing is deeply intertextual in that meaning emerges from a network where countless cultural influences and expectations, memories, discursive forms and conventions interact in such a way so as to question what it truly means to be a narrator and the kind of responsibilities storytelling brings about. That's why Rushdie constantly has Saleem undermine, by his own admission, the authenticity or reliability of his narrating voice. The hierarchical relationship between author and reader is disturbed since communication does not proceed in just one sense but also, as will be discussed in more detail, requires the reader's active participation. On the other hand, transmedial crossings and metanarrative contaminations encompass Rushdie's entire literary production. Suffice to think that this appears to be the central theme of his last novel, *Quichotte* (2019), in which he describes how the main characters, Quichotte and the woman he loved (Miss Salma R, a name with more than just a soft authorial echo), break through into the reality of the author:

> Often at the end of a working day the Author would fall asleep at his desk, his forehead resting on the wood, bowed down before the computer screen as if performing some ancient rite of worship.... That other world, which he now understood to be the one he himself had made, was a miniature universe, perhaps captured under a glass dome – a snow globe without snow – which had begun to crack, so that its minuscule inhabitants had become desperate to escape.... He saw the first minute creature enter, gasp and faint, its hope turning to despair in this new continuum inhabited by what to it were super-colossi, giant mastodons, able to crush it under their thumbs. The microscopic man, the creature of the Author's imagination, had brilliantly done the impossible and joined the two worlds, had crossed over from the world of Fancy into the Author's real world, but in this one he was unassimilable, helpless, puny, gasping for air, not finding it, choking, and so lost. Stop! cried the Author, knowing what would happen next, the thing he could not stop, for he had already written it; it had already happened, so it could not be prevented from happening. His heart pounded, feeling as if it might burst from his chest. Everything was coming to an end. The end cannot be changed after it has ended; not the end of the universe, not the death of an Author, nor the end of two precious, even if very small, human lives. (406)

All this aptly expresses Rushdie's declination of magical realism, a characteristic mixture in which history, fate, existence, imagination, irony and drama mirror one another in a prismatic play of fragments intermingling, overlapping, intersecting, and crossing at every moment during narration. When a clear-cut distinction between reality and imagination collapses, factual or historical accuracy fades to the background to give priority to the search for truth and the process of reconstruction against the fallacies of memory. Magical realism may be the most 'ethically' suitable form of narration for this

[19] Salman Rushdie, *Shame* [1988] (Vintage, 1995), 116. This bibliographical reference lacks the place of publication as it refers to the digital version available on the Google Play Store.
[20] Allen Graham, *Intertextuality* (London: Routledge, 2000).

task due to its implicit incertitude. It forces the reader to suspend judgement to look for plausible or sustainable connections.

Since Saleem fears he is about to die, he decides to narrate his story from the beginning. Time is running out, the rapid decay his body is undergoing may not allow the possibility for a recounting for much longer:

> Now, however, time (having no further use for me) is running out. I will soon be thirty-one years old. Perhaps. If my crumbling, over-used body permits. But I have no hope of saving my life, nor can I count on having even a thousand nights and a night. I must work fast, faster than Scheherazade, if I am to end up meaning – yes, meaning – something. I admit it: above all things, I fear absurdity. And there are so many stories to tell, too many, such an excess of intertwined lives events miracles places rumours, so dense a commingling of the improbable and the mundane! I have been a swallower of lives; and to know me, just the one of me, you'll have to swallow the lot as well. Consumed multitudes are jostling and shoving inside me; and guided only by the memory of a large white bedsheet with a roughly circular hole some seven inches in diameter cut into the centre, clutching at the dream of that holey, mutilated square of linen, which is my talisman, my open-sesame, from the point at which it really began, some thirty-two years before anything as obvious, as present, as my clock-ridden, crime-stained birth. (22)

The cracks and fissures appearing on his body are the result of a pressure from inside, it is history trying to break out of the limits of the fictional body in which it has been constrained (Saleem's), those very fissures from which, on another occasion, bitterness is said to come out in the streets (477). At the same time, there is a second movement contrasting the one just mentioned. Padma, the narratee to whom at a certain point in time Saleem starts to directly tell his story, is described as 'leaking' into him. That is, she, a fictional character, by desiring to know Saleem's story, appeases her "paradoxical superstition, her contradictory love of the fabulous" (63). There is a double, ambivalent movement from the inside to the outside and vice versa, which makes Saleem a gate, a joint or passthrough between history and invention:

> And certainly Padma is leaking into me. As history pours out of my fissured body, my lotus is quietly dripping in, with her down-to-earthery, and her paradoxical superstition, her contradictory love of the fabulous – so it's appropriate that I'm about to tell the story of the death of Mian Abdullah. (63)

Saleem is a breaking point interfering in the process of writing. There are cracks and breaches between the historical and the literary, such that whatever happens in Saleem's life mirrors the history of his nation, what happens in the lives of the people in his fictional world also matters for the lives of his countrymen. Referring to life in the magicians' ghetto, he reveals that "our ancient national gift for fissiparousness had found new outlets" (575) there. This seems to be a very indicative hint about the kind of disintegration that Saleem's body is undergoing. The word 'fissiparous' first entered English in the XIX century.[21] In biology, it refers to an organism which reproduces by fission. The process of division implied to in the word is connected to life and reproduction, not destruction and death. According to the definition provided by the Merriam-Webster dictionary online "by the end of the 19th century 'fissiparous' had acquired a figurative meaning, describing something that breaks into

[21] It comes from Latin *fissus,* the past participle of 'findere' ('to split'), and *parere,* 'to produce' or 'to give birth'.

parts or causes something else to break into parts".[22] Rushdie chooses a term that indicates partition, yet it is the kind of division which destroys to bring stronger and maybe bigger unity, that allows life to grow. Division thus points ambivalently towards death and birth. That's how magical realism works in Rushdie: it breaks unity to create new bonds, so that more things can interact and grow stronger connections and ties. Proceeding from the intersection between the real and the imaginary, narration appears to be a way for both of them to survive by impregnating each other, giving occasion to the story of the two families to which Saleem claims to belong: the first one is made up of his parents and sister; the second one by the midnight's children like him. It is essential to note that neither family is based on consanguinity.

In fact, Saleem is a changeling. He is not the biological son of Amina and Ahmed Sinai, the bourgeois Bombay couple who raise him as a son. Right after being born, at Dr Narlikar's Nursing Home, he was swapped with Shiva (the true biological heir of the Sinais), by Mary Pereira, a nurse working there at the time and who would later become Saleem's nanny. His biological parents are the destitute Vanita, wife of the street musician Wee Willie Winkie, and William Methwold, an old Englishman bearing the same name of the planner of the city of Bombay. The exchange allows Rushdie to achieve several remarkable outcomes. First of all, the dismantlement of the idea of family as something necessarily regulated by blood ties, one of the founding notions of the idea of modern nations. Moreover, this disruptive act is carried over in one of the main national institutions formally devoted to 'care', the hospital, and to the care of the children no less, a maternity hospital.[23] Thirdly, each of his familial ties participates in a complex play of intertextual relations which makes them readable at different levels or, in the words of Matt Kimmich: "The profusion of the literal and metaphorical, probable and possible parent figures in *Midnight's Children* ... turn each of these figures from authors into texts themselves, texts that can be reread and rewritten as is possible with all text".[24] The play on Saleem's true birth or origin makes him simultaneously the son of his biological parents, of his foster parents, of the nation, of the coloniser, and more generally of Time. Yet, two questions arise: if Saleem is the product of mixed genealogies and timelines, at one time son of chance and inevitability, who is responsible for him? And who is he responsible for?

## 2. Responsibility as an Imaginative Effort

Rushdie's concern consists in expressing this situation of confusion by blurring the difference between plot and story, as distinguished by French structuralism and Russian formalism.[25] The 'story' refers to the events which make up a given situation or literary account of it, while the 'plot' is given by the particular temporal sequential order in which those events are related. In the case of Saleem, Rushdie chooses to make the story begin way before his birth, with the falling in love of his grandparents. Among other things, this allows him to build a sense of ominous anxiety or threatening foreboding due to the inescapable workings of Time. In fact, he concentrates on the circumstances that would later

[22] The quote can be found following this link: *www.merriam-webster.com*.
[23] Neil Forsyth and Martine Hennard, "Mr Mustapha Aziz and Fly: Defamiliarization of 'Family' in Salman Rushdie's *Midnight Children*", in Werner Senn, ed., *Families* (Tübingen: Gunter Narr Verlag Tübingen, 1996).
[24] Matt Kimmich, *Offspring Fictions: Salman Rushdie's Family Novels* (Amsterdam-New York: Rodopi, 2008), 24.
[25] Stephen G. Post, ed., *Encyclopedia of Bioethics*, Third Edition, Vol. 4 (New York: MacMillan Reference USA, 2003), 1875-1879.

bring to Saleem's life being prophesied to his mother, which is reminiscent of the prophecy Oedipus' parents received before his birth. His true story, however, begins much later, when he actually finds out about his mother's infidelity and a sneeze activates the telepathic powers he would later put at the service of the nation. If familial relations in the novel represent a privileged path to Saleem's maturation and understanding of responsibility during narration, at no point are they more significant than in the months immediately preceding the Emergency, whose recounting abounds with metaphors of birth, rebirth and death.

After taking part in the Indo-Pakistani war, Parvati the Witch brings Saleem back to India inside a magic basket. This coming back on Indian soil is likened to a 'rebirth' by Saleem, and the magic basket is like a womb from which Saleem 'tumbles out'. He starts regaining his powers and decides that it is finally time to save the nation: "and now that I had given myself the right to choose a better future, I was resolved that the nation should share it, too. I think that when I tumbled out into dust, shadow and amused cheers, I had already decided to save the country" (556). He refuses to have a family with Parvati as he sees himself as sterile: not physically, but metaphorically, since he has become progressively disillusioned with the idea of family as something determined by blood. Saleem's choice to give up a traditional family and have children of his own may be hard to grasp if one does not take into account his disenchantment with blood ties, which he has learned to see as unnecessary since he was a child. The general decline or failure of the will to procreate children on Saleem's part expresses his need to establish new bonds beyond breeding. In fact, before embarking on his quest into "newness" (560) for the future of the country, he has to confront what survives of his old family.

After leaving the magicians' ghetto, Saleem feels the need to bring together what remains of his family and learn what has become of his parents and sister. He joins the surviving members of his family by going to the Civil Service bungalow off Rajpath, the city where his birth was first publicly announced, and in which his uncle Mustapha Aziz lived together with his wife, Sonia.[26] The latter despises him, and wishes to kick him out of the household. She confesses to having always thought of him as a "nasty little brat" (563), who was deluded into thinking of being destined to something great by what she considered a fake letter that Prime Minister Nehru had written for him by a "fifteenth assistant under-secretary" (Ibid.).[27] His uncle had aspirations to become head of the department in which he worked, but had always been passed over. This was cause for a frustration which he took out on his children, or vented with endless tirades about being a victim of anti-Muslim prejudice, even though he nurtured an unconditioned devotion to power and every decision of Prime Ministers such as Indira. He had forced his wife to live a life as a flatterer of the wives of powerful men, only to end up complaining about his failures. This devoted Indian family is all but in good shape in post-Independence India, deprived as it is of love and affection, where children are "pulverised" (564) by the hatred their father nurtures for being neglected by the nation, whose recognition he yearns for. Saleem admits that his cousins have been reduced to a pulp, so much so that he can not even recognize their sexes or features, while "their personalities, of course, had long since ceased to exist" (564). The description of Mustapha's family represents a strong critique of Indian political establishment, who

[26] Whose name sinisterly suggests or foretells a link to Indira, since Sonia Gandhi would be future president of the Indian National Congress party and wife of Rajiv Gandhi, Indira's eldest son.
[27] Neil Ten Kortenaar, *Self, Nation, Text in Salman Rushdie's Midnight's Children* (Quebec City: McGill-Queen's Press, 2004).

had failed to protect and help the very foundation of its society, the family, reducing its members to incommunicability, moral pettiness and unsubstantiated ambition.

When his aunt learns that Saleem had fought for Pakistan she refuses to feed him. She considers him a war criminal and fears that simply hosting him may cost them ending their lives up on the streets. They are in a Civil servant's household, after all, and Saleem could put their social position in jeopardy. Sonia aspires to a normal life as respectable citizens of their nation, so being publicly shamed and misrecognized by the system represents her worst fear: "Go, be a prisoner of war, why should we care, you are not even our departed sister's true-born son" (566), she admits. The reference to Saleem's being a bastard is her ultimate delegitimation of Saleem's place not just in their home, but in India as well. Contrary to his parents, the aspiration for social security and acceptance makes his aunt and uncle reject him as a member of the family, reducing him to a stranger. Saleem's family does not acknowledge any familial obligation to him in order to preserve a place in the wider Indian national community which in turn denies them an upstanding life.

Even though in the first part of narration his family tree and the delineation of relative ties had played great importance, Saleem is now ready to do without the very idea of family and familial relations. The dissolution of the idea of family as founded on blood relations had already started when it was found out that Saleem was not the biological son of Amina and Ahmed:

> when we eventually discovered the crime of Mary Pereira, we all found that it made no difference! I was still their son: they remained my parents. In a kind of *collective failure of imagination*, we learned that we simply could not think our way out of our past.[28] (176)

Sophie Ratcliff[29] points out that it is cultural notions and shared memories which create bonds, not blood or soil: Saleem could not think of himself as other than his parents' child, and his parents could not see themselves as anything other than just that. The 'truth' that Saleem was a changeling could not scratch the simple and overwhelming 'fact' or 'reality' that they were still a family in every sense of the word. That blood mixing as an originary point in time for the 'birth' of a new familial connection is just an illusion, an affective anchor to mark the beginning of a new relationship which is actually born backwards, since it is determined by time spent together. Blood relationships are secondary to family: being one is mainly a matter of imagining themselves as such. Shared experience and cultural heritage prevented their family from thinking of themselves as otherwise. The act of thinking and speaking of themselves as a family had actually made them a family. What creates familial bonds is not blood. Blood is just the occasion which sets up the context to speak about oneself and other relatives as a family, and it is the latter operation that is constitutive, that creates long-standing bonds. The creative power of language has always been one of Rushdie's reiterated literary concerns, which is often disregarded in favour of its descriptive properties.[30] That's why Rachel Trousdale[31] focuses on Saleem's observation that it is the act of not loving a child, or a parent, that is monstrous, not physical monstrosity. Responsibility does not depend on something physical, on the condition of having a body or finding oneself in a given place. Responsibility derives from an emotional bond. The familial

[28] Emphasis mine.
[29] Sophie Ratcliffe, *On Sympathy* (Oxford: Oxford U.P., 2008).
[30] See, for example, Salman Rushdie, *Step Across This Line: Collected Non-Fiction 1992-2002* (London: Jonathan Cape, 2002).
[31] Rachel Trousdale, *Nabokov, Rushdie, and the Transnational Imagination: Novels of Exile and Alternate Worlds* (New York: Palgrave Macmillan, 2010).

relationship between Saleem and his parents is rooted in the act of imagining themselves as a family: only if they can imagine themselves as such, responsibility can follow. The bond uniting Saleem to his family is consequently not so different from the one that unites him to the Midnight's Children: it's just the product of a shared fantasy which precedes and determines them as a community.

Matt Kimmich[32] points out that Saleem's family parable would allow one to trace many connections with Freud's notion of the 'family romance'.[33] He is of course aware that applying Freud's theories to an Anglo-Indian novel is problematic, especially after feminism criticism has highlighted many contradictions inherent in Freud's underlying gender bias and the fact that many of his observations may be pertinent to late XIX Vienna more than twentieth century India. Yet, it appears to be absolutely relevant in the fact that Saleem, just like the young boy for Freud, cannot maintain the idealized image of their parents. Their faults and shortcomings become soon apparent, making them unworthy of being considered the sole and absolute authority in his eyes. And just like the Freudian male child, who imagines to be adopted as a reaction, Saleem too has his parents turned into stepparents. He witnesses his mother's love for another man, and it is that circumstance which activates his telepathic powers. In another indirect reference to Freudian concepts, Saleem's love for his sister Jamila could be seen as the result of his attempt at compensating the inequalities in the degree of certainty between the parents' status[34] through his mother's infidelities. In Freud, such fantasy allows a male child to see himself as the only legitimate child, while others could be illegitimate. Love towards a sister could thus become legit, since it would be seen no longer as incestuous. Such fantasy would permit the child to correct the situation and return to the initial idealized state in which the parents' authority is absolute and worthy of his efforts to become the ideal parent of his sex. In a final referencing to the Oedipal complex, whereas in Freud rivalry with the father results in anxiety of castration, in the novel Saleem too is castrated during the Emergency which, as anticipated earlier in the essay, constitutes the arrival destination of his storytelling.

Postcolonial critic Edward Said's distinction between 'filiation' and 'affiliation' represents a powerful critical tool to read into Saleem's actions and circumstances. The former refers to a biological, and consequently deterministic, relation. The latter is freely chosen, adopted willingly:

> Thus if a filial relationship was held together by natural bonds and natural forms of authority – involving obedience, fear, love, respect, and instinctual conflict – the new affiliative relationship changes these bonds into what seem to be transpersonal forms.... The filiative scheme belongs to the realms of nature and of "life," whereas affiliation belongs exclusively to culture and society.[35]

Having already refused to set up a family with Parvati, Saleem's hopes of establishing a biological bond with future generations are destroyed when his uncles tell him of the death of his sister Jamila, with whom he is secretly in love. The rejection and betrayal of his uncle Mustapha and the contempt of his aunt Sonia totally deprive Saleem of any sense of belonging to a family. This situation creates an involuntary mutual hostility which prompts Saleem to look for new relationships. Only at that

[32] Kimmich, *Offspring Fictions*.
[33] Sigmund Freud, "Family Romances" [1908], in Otto Rank, "The Myth of the Birth of the Hero", *Journal of Nervous and Mental Disease*, 41.1 (January 1914).
[34] That is, if there can be no doubt about the mother, one cannot be absolutely sure about the father.
[35] Edward Said, *The Text, the World, the Critic* (Cambridge, Mass.: Harvard U.P., 1983), 20.

moment is Saleem fully prepared to try and save India, and his brothers and sisters of the Midnight's Children Conference are no less important since he sees them as his only remaining family. Following Bill Ashcroft and Pal Ahluwalia,[36] in a context where patterns of filiation become increasingly hard to maintain or respect, Saleem resorts to patterns of affiliation to emancipate himself from parental authority to look for new relationships and, in doing so, keep alive the sense of responsibility towards the future that had been instilled in him since his birth:

> Childless couples, orphaned children, aborted childbirths, and unregenerately celibate men and women populate the world of high modernism with remarkable insistence, all of them suggesting the difficulties of filiation. But no less important in my opinion is the second part of the pattern, which is immediately consequent upon the first, the pressure to produce new and different ways of conceiving human relationships. For if biological reproduction is either too difficult or too unpleasant, is there some other way by which men and women create social bonds between each other that would substitute for those ties that connect members of the same family across generations? (17)

Affiliation to the midnight's children allows wannabe hero Saleem to overcome the exclusivity of the idea of purity, which legitimises familial belonging only on a biological basis, as well as to overturn the passive hierarchization of filiation, by virtue of which fathers remain fathers and children remain subordinated offspring no matter what. By challenging Indira Gandhi's nefarious stronghold on the country, Saleem thus pursues a new opportunity to gain power and agency, to take on responsibility towards his people by using his extraordinary faculties to the benefit of the national community. When that is made impossible due to the mutilations inflicted by Indira Gandhi, his only means to connect with the future will be writing and storytelling.

## 3. Clinical Storytelling: Narration and Disease

Considering all the above, Matt Kimmich would be right in observing that the trope of family as used by Rushdie in *Midnight's Children* has not received sufficient critical inquiry, especially in light of the ambiguous relationship he establishes with his metaphorical and literal kinship, from his imaginative parentage to "his midnight siblings [who] are in the end destroyed by their quasi-maternal nemesis"[37] during the Emergency.

The Emergency was officially declared on 25 June 1975 and lasted for a total of twenty-one months. Apparently, the internal equilibrium and political stability of the nation was threatened by political turmoil. For this reason, Indira Gandhi deemed extreme political measures as the only possible solution to contrast the situation. In reality, the Emergency was just an excuse to confer upon herself an almost absolute power, gain military and media control, and silence or annihilate opposition. Indira's twenty-point programme was made public shortly after the declaration of the Emergency, but it was the five points that were added to it by her son Sanjay that truly revealed the ethos of that period. Among those, there are two of the utmost importance: a new agenda for family planning and the 'beautification' of the environment, two necessary countermeasures for respectively an overcrowded country which had somehow overgrown itself, and the problem of the slums which

[36] Bill Ashcroft and Pal Ahluwalia, *Edward Said* (London: Routledge, 1999).
[37] Kimmich, *Offspring Fictions*, 15.

disfigured cities and the landscape in general. In simpler terms, the country's population had to be forcibly reduced, while buildings or other architectural heritage which 'stained' India's beauty had to be destroyed. This meant enforced castrations as a measure of birth control and the eradication of ghettos, shanty towns or slums, even though thousands of people were 'accidentally' killed during such cleansings. In fact, one of the political ambitions of the Indian Emergency was preventing the poor from having a family, destroying their homes and the possibility for them to have children by taking their reproductive capabilities away from them. Among the hidden rationales behind this conduct there was the arms race which India had been pursuing for some years. Decimating the population plagued by poverty would be seen, internationally, as a demonstration of responsibility on the part of the Indian government, especially in the eyes of the United States and the administrations of Nixon and Johnson. Pursuing nuclear weapons was seen as irresponsible by those administrations, in light of the exponential growth of poverty. This had resulted in a decline of the relationship between India and the United States. Reducing poverty was an action taken to prove that India was a credible international force, a worthy interlocutor on the global political scene both for its strong military power and sustainable internal economic model.

To Saleem and the midnight's children, however, the Emergency months were ones of captivity, torture and, above all, sterilization. They had to be made infertile so that they could not represent a menace for Indira Gandhi's control over the country. Men were made to undergo vasectomies, women tubectomies. Saleem plays on the etymology of those words to forge a neologism, 'sperectomy'.[38] That is, with the mutilation of the reproductive organs of the children of midnight the nation had been de facto drained out of hope:

> But what I learned from the Widow's Hand is that those who would be gods fear no one so much as other potential deities; and that, that and that only, is why we, the magical children of midnight, were hated feared destroyed by the Widow, ... And that was how I learned my meaning in the crumbling palace of the bruised-breasted women. Who am I? Who were we? ... They were good doctors: they left nothing to chance.... testicles were removed from sacs, and wombs vanished for ever. Test- and hysterectomized, the children of midnight were denied the possibility of reproducing themselves ... but that was only a side-effect, because they were truly extraordinary doctors, and they drained us of more than that: hope, too, was excised, ... children who had lost their magic: ... now fishes could not be multiplied nor base metals transmuted; gone forever, the possibilities of flight and lycanthropy and the originally-one-thousand-and-one marvellous promises of a numinous midnight. Who were we? Broken promises; made to be broken. (631-632)

That's when Saleem's storytelling becomes a bioethical effort: when, through narration and writing, he takes on responsibility for the 'idea' of India as can be imagined both inside and outside the fictional world. His story is metanarratively concerned with its own responsibility to protect the life of a community and its environment from threats coming from political action or technological adoption, assure its continued existence. It masterfully plays with ideas of family, health, fertility and

[38] "O insidious nostalgia for times of greater possibility, before history narrowed down to this final full point! Ectomy (from, I suppose, the Greek): a cutting out. To which medical science adds a number of prefixes: appendectomy tonsillectomy mastectomy tubectomy vasectomy testectomy hysterectomy. Saleem would like to donate one further item, free gratis and for nothing, to this catalogue of excisions; it is, however, a term which properly belongs to history, although medical science is, was involved: Sperectomy: the draining-out of hope" (629).

reproduction as a way to transmit one's own biological and cultural heritage and grant historical continuity and sustenance. Storytelling may be his final chance on destiny.

Rushdie's emphasis on affiliation and the body is essential to understand the intricacies and resonances within his own narration. Because narrative is the primary way of organizing and communicating what sense human beings make of the world, Rushdie recognizes that it is the interpretive process integral to shaping and understanding a story that is the true heart of human knowledge. The blending and confusion of narrative planes is directly connected to the investigation of narrative forms that are useful in understanding how knowledge is acquired and transmitted. As discussed earlier in the essay, the strict relationship existing between Saleem and India creates a double exposure, simultaneously of Saleem's body and India's social tissue, which makes circumstances not precisely and unambiguously narratable. Life is seen as the unpredictable interaction of time and social norms, regulated by variables which defy human control and make any narration enter into a dialogue with many other narratives and countless interpretations. Moral understanding and knowledge are intimately relative, subject to personal and progressive elaboration and reinterpretation, and always open to scrutiny and questioning.

Once we accept that his 'diseased', crumbling body puts Saleem not just in a hurry, but endows him with a greater sense of responsibility matured after his disillusionment with the idea of familial belonging, the kind of account Saleem gives of his life becomes especially meaningful. If Walter Benjamin[39] deemed the certainty of death the required conclusion of narrative meaning, Saleem's narrative reveals a "hunger for meaning in the face of death".[40] By recognizing that he resorts to writing as an ethical attempt at passing on knowledge and looking for meaning in light of the imminent demise of his existence, narration can also be compared to the sort of medical account that a patient gives of one's own illness to a practitioner. In Saleem's words, there seems to be implied a listener disposed to hear and interpret his story. His account does not take place outside of a structure of address, even if the addressee remains implicit and unnamed, anonymous and unspecified. The reader is an Other that acts as "a placeholder for an infinite ethical relation".[41]

The bioethical effort of narration proceeds insomuch as it assumes a clinical epistemology demanding the participation of storyteller and readers, be them real or imaginary, as both become progressively aware of the relativity of the human comprehension of individual and social experience. This way, just like in clinical medicine (where underlying uncertainty makes narration vital), Rushdie makes Saleem's narration a radically ambiguous, or uncertain, field of literary knowledge. His health problems are the result of interaction of physiological processes occurring within a socially and culturally constructed situation.[42] Saleem's 'disease' is not just, or not simply, rooted in human biology, so it is impossible to consider it by applying scientific knowledge alone. Rushdie places his diseased character at the crossroads between history and fantasy, where complex and unpredictable interactions make his account oscillate constantly between certainty and uncertainty, between truths put into doubt and false claims disguised as objective facts. One could refer to Judith Butler's drawing

[39] Walter Benjamin, *The Storyteller Essays: Tales out of Loneliness*, ed. by Sam Dolbear et al. (London and New York: Verso Books, 2016).
[40] Stephen G. Post, *Encyclopedia of Bioethics*, 1876.
[41] Judith Butler, *Giving an Account of Oneself* (New York: Fordham U.P., 2005), x.
[42] Kathryn Montgomery Hunter, *Doctors' Stories: The Narrative Structure of Medical Knowledge* (Princeton, NJ: Princeton U.P., 1991).

on the philosophy of Lévinas and his ideas of ethics, to recognize in Saleem's narration an authorial opacity through which he can establish its most important ethical bond, the one with the reader.[43] As Butler notes, authorial opacity, as an acknowledgement of one's own limits represents "a self-limiting act and [...] to experience the limits of knowing itself. This can, by the way, constitute a disposition of humility, and of generosity, since I will need to be forgiven for what I cannot fully know, what I could not have fully known, and I will be under a similar obligation to offer forgiveness to others who are also constituted in partial opacity to themselves" (28).[44]

Saleem makes mistakes in circumstances where his narration seems to be as objective as possible, as close to the truth as it could be, but later nonchalantly admits that what had earlier been presented as truth was (or could) be a mistake, a trick of his memory or imagination. Far from regretting or being sorry for those false impressions, he demands the reader acknowledge such false claims as essential to his narration, as they were 'symptomatic' of the circumstances. Fallacies and incongruities are inevitable outcomes of the act of remembering and of transcribing what is remembered. Sometimes, the most appalling truths emerge in the most improbable and unrealistic situations, which makes them all the more fearful in the mind of the reader. At other times, Saleem even stops to consider plausible diagnostic plots, taking into consideration life-threatening options and then proceeding to eliminate the least likely. Saleem as narrator is even caught having a battle with himself, surrendering his authorial agency to the necessities of narration itself:

> I don't want to tell it! – But I swore to tell it all. – No, I renounce, not that, surely some things are better left ...? – That won't wash; what can't be cured, must be endured! ... But how can I, look at me, I'm tearing-myself apart, can't even agree with myself, talking arguing like a wild fellow, cracking up, memory going, yes, memory plunging into chasms and being swallowed by the dark, only fragments remain, none of it makes sense any more! – But I mustn't presume to judge; must simply continue (having once begun) until the end; sense-and-nonsense is no longer (perhaps never was) for me to evaluate. (607)

However, Saleem's goal is not healing or recovery. Following Judith Butler, the confusion of allegorical, metaphorical and symbolic references abounding in Saleem's recounting are Rushdie's way of raising the reader's attention to the disease affecting its author, who tries "to give a sequential account for [what the storyteller know] cannot, finally, be grasped in sequential terms, for that which has a temporality or a spatiality that can only be denied or displaced or transmuted when it assumes narrative form".[45] Even more importantly, India would be a referent that "works as a constant threat to narrative authority even when it functions as the paradoxical condition for a narrative, a narrative that gives provisional and fictive sequence to that which necessarily eludes that construction" (Ibid.). With his admissions, clarifications and corrections, not only does Saleem have his audience understand the limitedness of his own knowledge, but also that what can be known or extracted from narration is.[46] Such uncertainty about narrative and human knowledge in general brings about a new sense of ethics itself as it makes both narrator and readers aware of their own limits. By making the two enter a dialogue, Saleem's account is a negotiation of story and teller, story and listener, not aimed at a

[43] Butler, *Giving an Account of Oneself*.
[44] Ibid., 28.
[45] Ibid., 27.
[46] Montgomery Kathryn Hunter, "The Whole Story", *Second Opinion*, 19 (1993), 97-103; from the same author, "Narrative, Literature, and the Clinical Exercise of Practical Reason", *Journal of Medicine and Philosophy*, 21.3 (1996), 303-320.

definitive conclusion, but aimed at making narration an effort to turn ethics into a practical knowledge based on a healthy scepticism about answers. The paradoxical outcome, if any, is a contained representation of incommensurability. Narration, paraphrasing Saleem's own description of both his physical and historical condition in the novel,[47] can't be helped or cured. It can only be endured.

[47] Rushdie, *Midnight's Children*, 629.

Giuliana Garzone

# Exploring the Complexities of Bioethical Discourse. Primate Cloning in the Press[1]

**Abstract**: Among bioethical themes at the centre of public debate, one of the most sensitive is cloning, which has been controversial since its official appearance on the scene in the 1990s. The debate on the practice and its possible future application to humans has never ceased since Dolly the sheep was first born in 1996. It gathered new momentum when in late January 2018 Chinese researchers announced that they had successfully cloned two macaque monkeys applying a perfected version of the technique originally used to create Dolly. A barrier had been broken, and inevitably a whole series of ethical concerns were raised.

This article looks at the coverage of the 2018 monkey cloning success in the daily press worldwide, and at the discursive procedures used to illustrate its significance, including the popularisation strategies deployed. The focus of the analysis is on ethical implications, with special regard to animal testing ethics and to the possible extension of the technique to humans.

Keywords: *bioethics*, *ethics discourse*, *human cloning*, *monkey cloning*, *popularisation*

## 1. Introduction

Among bioethical themes at the centre of public debate, one of the most sensitive is cloning, which has been controversial since its official appearance on the scene in the 1990s. In this connection, it is impossible to overstate the importance of the role of the media in disseminating information about the technical aspects of bioethically relevant scientific advances, their viability and potential developments, since popularised knowledge weighs heavily on how people conceptualise issues and form an opinion about the ethical admissibility and lawfulness of their applications.

As far as cloning is concerned, the debate on the practice and its possible future application to humans has never ceased since Dolly the sheep was first born in 1996. It gathered new momentum when in late January 2018 Chinese researchers announced that they had successfully cloned two macaque monkeys applying a perfected version of the technique originally used to create Dolly. A barrier had been broken, and inevitably a whole series of ethical concerns were raised.

This article looks at the coverage of the 2018 monkey cloning success in the daily press worldwide, and at the discursive procedures used to illustrate its significance, including the popularisation strategies deployed. The focus of the analysis is on ethical implications, with special regard to animal testing ethics and to the possible extension of the technique to humans.

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## 2. Background

As Temmerman makes clear in an essay that questions the myth of the univocity of technical terms,[2] 'cloning' is one of those technical words that do not have a stable meaning. Originally introduced in 1903 to refer to a horticultural practice, it has in time extended and shifted its meaning to refer to various procedures of cell manipulation to obtain identical copies.[3] The meaning of this term relied on in the articles analysed here is equivalent to 'somatic cell nuclear transfer' (SCNT), in which "the nucleus from a somatic cell (an ordinary body cell) of an organism is inserted into the de-nucleated egg of another (female) member of the same species ... and triggered into developing an embryo".[4] In some cases where it is specified, it may refer to the production of clones by 'embryo splitting' or 'twinning', i.e. by splitting apart an embryo, as happens naturally to produce identical twins, a simpler method, which however produces a more limited number of offspring. In connection with the definition of 'cloning', a further distinction needs to be made between reproductive cloning, i.e. "the use of SCNT to produce human embryos to implant into the wombs of women (which) will produce human babies with genome identical to the nucleus donor", and 'therapeutic cloning', i.e. "the use of SCNT to produce human embryos genetically identical to the nucleus donor (which) are then used for research of for the harvesting of stem cells, then destroyed" (96). Although also the latter procedure may lend itself to ethical reserves, the debate on the ethical aspects of the practice, including the likelihood of human cloning, has mainly focused on reproductive cloning.

Immediately after Dolly the sheep's birth various books were published on the theme of the ethics of human cloning. Suffice it to mention two of them which represent the main trends in the literature ever since, *Human Cloning* by Humber and Almeder,[5] collecting some essays that take a stance in favour of human cloning, refuting sophistically all arguments against it, and *The Ethics of Human Cloning* by Kass and Wilson,[6] which, on the contrary, argues in favour of a limitation or an outright ban on all forms of human cloning, at least until more efficient and safer procedures are found. Since then, a rich literature on human cloning has been published, with a recurrence of the two opposite stances, from different points of view (medical, ethical, social, etc.). Instead, within the context of an otherwise immense literature on ethical issues in animal testing, much less attention has been given specifically to the impact of cloning on animals, which has been dealt with in isolated book chapters, e.g. in Panno's *Animal Cloning,*[7] or in scientific articles.[8]

An important element to be considered is that human cloning is legally banned in many countries of the world, with various degrees of strictness, i.e. in some cases extending also to therapeutic

[2] See Rita Temmerman, "Questioning the Univocity Ideal", *Hermes Journal of Linguistics*, 18 (1997), 68-77.
[3] Temmerman's essay features a detailed discussion of the evolution of the meaning of the word 'cloning' in time.
[4] Marianne Talbot, *Bioethics: An Introduction* (Cambridge: Cambridge U.P., 2012), 95.
[5] James M. Humber and Robert Almeder, eds., *Human Cloning* (Totowa: Humana Press, 1998).
[6] Leon R. Kass and James K. Wilson, *The Ethics of Human Cloning* (Washington: Aei Press, 1998).
[7] Joseph Panno, *Animal Cloning: The Science of Nuclear Transfer* (New York: Facts on File, 2005), 66-73.
[8] See for instance Rudolph Jaenisch, "Human Cloning: The Science and Ethics of Nuclear Transplantation", *New England Journal of Medicine*, 351 (December 30, 2004), 2787-2791.

cloning. In March 2005 the United Nations issued a non-binding *Declaration on Human Cloning*,[9] calling upon all member states "to prohibit all forms of human cloning inasmuch as they are incompatible with human dignity and the protection of human life", inviting all governments to take relevant measures. So far, to my knowledge no studies have been published on the linguistic and discursive representation of ethical issues in cloning research.

### 2.1 *Materials and method*

This study is based on the analysis of a corpus of 154 news items and editorials downloaded from Lexis Nexis, which have been retrieved limiting the search to a specified date range comprising thirteen days after the announcement that two macaques had been generated through cloning (23 January to 4 February 2018) and using as search words 'clon* + monkey*'. It includes print and online newspaper articles (news and editorials), as well as some news wires and journalists' blog posts, published in various countries of the world (Europe, United States, Canada, Australia, Middle East, China) in the days immediately after the announcement of the breakthrough, among them different editions of some English-language Chinese outlets, mainly newspapers aimed at an international or area-specific public (*China Daily* Africa, *China Daily* US edition). The corpus comprises 97,814 words, 154 texts, each featuring from 376 to 1,305 words, with a STTR of 41,99.

This study also considers, for obvious comparative purposes, the scientific research article that announced the breakthrough,[10] which can be seen as the source, or at least, the main reference, of the information set out in the popularising articles.

In terms of methodology, the main frame of reference is in discourse analysis[11] and Critical Discourse Analysis,[12] and starts from the assumption that in the press discourse has often the more or less deliberate effect of orienting the audience's views about facts reported in news articles, especially when 'sensitive' topics are being dealt with.[13]

Reference is also made to research on popularization discourse, and in particular on the strategies used to make scientific knowledge accessible to the layman. Calsamiglia and van Dijk[14] describe five such strategies that they collectively see as forms of 'explanation': 'denomination', often realised with recourse to expressions like 'denominated', 'called', 'known as', 'so-called', 'technically called', etc.; 'definition', often in the form of 'genus proximum et differentia specifica', introduced by an apposition and a relative clause, or a relative clause only; 'reformulation' or 'paraphrase', given in the form of an apposition, or in brackets, or introduced by expressions like 'that is or in other words';

[9] See digitallibrary.un.org.
[10] Zhen Liu et al., "Cloning of Macaque Monkeys by Somatic Cell Nuclear Transfer", *CELL*, 172 (February 2018), 881-887.
[11] See for example Jan Blommaert, *Discourse: A Critical Introduction* (Cambridge: Cambridge U.P., 2005); Gillian Brown and George Yule, *Discourse Analysis* (Cambridge: Cambridge U.P., 1983).
[12] See for example Norman Fairclough, *Critical Discourse Analysis: The Critical Study of Language* (Harlow: Longman, 1995.); Ruth Wodak and Michael Meyer, eds., *Methods of Critical Discourse Analysis* (London: Sage, 2001).
[13] See, among others, Teun A van Dijk, *News as Discourse* (Hillsdale: Lawrence Erlbaum Ass. Publishers, 1988); Roger Fowler, *Language in the News: Discourse and Ideology in the Press* (London: Routledge, 1991).
[14] Helena Calsamiglia and Teun A. van Dijk, "Popularization Discourse and Knowledge about the Genome", *Discourse & Society*, 15.4 (2004), 369-389. Special issue *Genetic and Genomic Discourses at the Dawn of the 21st Century*, guest-edited by Brigitte Nerlich, Robert Dingwall, Paul Martin.

'analogy' or 'association', consisting of similes, often introduced by expressions like 'similar to', 'like', 'not different from', 'the same as', or metaphors; 'generalisation' clarifying the character of an object or action by presenting it within the context of all or most members of a set. Garzone[15] identified a further recurrent strategy, 'explication' proper, whereby the reader is offered information that enriches his/her knowledge of the subject matter treated.

The popularisation process involves not only a semiotic reorganisation at the communicative level and recourse to explanatory strategies, but also a degree of cognitive restructuring. Transmitting scientific knowledge and transforming "objects and states of knowledge of the world of science into the *objects of media discourse*"[16] entails an overall process of 'explanation', but above all a proposal for their re-interpretation in terms of social knowledge.[17] In the case of the articles on monkey cloning analysed here, the contents of the highly dense and highly complex scientific text in which the breakthrough was announced, essentially focusing on technical aspects and procedures, are selectively reduced and recontextualised as a description of the successful experiment, and integrated with considerations about its scientific and social significance. In this respect a useful notion is that of entextualisation, originally introduced in anthropology[18] to refer to the extraction of meaning from one discourse and the consequent insertion of that meaning into another discourse through a process of de-contextualizsation or 'decentering' and its 're-centering' in another context.[19] As we shall see, in the case at hand the original scientific article announcing the success of the cloning experiment is far too complex for any part of it to be reused, albeit simplified. Rather there is a tendency to incorporate in the text and re-center various declarations and comments made by experts. In actual fact, citation is the most obvious form of incorporation of others' discourse into one's discourse and is widely relied on in journalism and in popularising texts. In particular, when the scientific information given in an article is especially complex, and the writer is not an expert, citation may serve a double purpose:[20] it guarantees effectiveness in expression and credibility, conferring authority and legitimacy on what is being said; at the same time attribution to an expert absolves the journalist from responsibility for the accuracy and truthfulness of the contents which, instead, 'averral' would have entrusted him/her.[21] As will be seen shortly, in the articles under investigation here, citation is used intensively, not so much to guarantee accuracy and authoritativeness to information, but rather as a way to express qualified views about the controversial issues being discussed.

This study is essentially qualitative, also on account of the relatively small size of the corpus

[15] Giuliana Garzone, *Perspectives on ESP and Popularization* (Milano: CUEM, 2006); "News Production and Scientific Knowledge: Exploring Popularization as a Process", in Giuditta Caliendo and Giancarmine Bongo, eds., *The Language of Popularization: Theoretical and Descriptive Models* (Bern: Peter Lang, 2015); *Specialized Communication and Popularization in English* (Roma: Carocci, 2020).

[16] Sophie Moirand, "Communicative and Cognitive Dimensions of Discourse on Science in the French Mass Media", *Discourse Studies*, 5.2 (2003), 175-206, 183, emphasis in the original.

[17] Ibid., 191.

[18] Michael Silverstein and Greg Urban, "The Natural History of Discourse", in Michael Silverstein and Greg Urban, eds., *Natural Histories of Discourse* (Chicago: Chicago U.P., 1996), 1-17.

[19] Ibid., 15.

[20] Helena Calsamiglia and Carmen López Ferrero, "Role and Position of Scientific Voices: Reported Speech in the Media", *Discourse Studies*, 5.2 (2003), 147-173.

[21] John Sinclair, "Fictional Worlds", in Michael Coulthard, ed., *Talking about Text: Studies Presented to David Brazil on His Retirement* (Birmingham: University of Birmingham, 1986), 43-60.

investigated (about 100,000 words). However, corpus linguistics tools[22] are also used to identify salient aspects, while avoiding the subjectivity and arbitrariness in discourse interpretation of which the eminently qualitative approach of CDA has been accused.[23]

## 3. Analysis

The analysis will start with a brief discussion of the peculiar features of the research article that announced the successful cloning of the two monkeys and will go on to focus on the corpus of newspaper articles. The scientific research article announcing the breakthrough was published in the Journal *Cell,* a prestigious journal in the area of cellular biology with an impact factor of 31.398 (updated to 2017). The article, signed by Liu et al., a group of researchers from the Chinese Academy of Science, dated 8 February 2018 but published online in advance on 22 January,[24] focuses on the method used to clone non-human primates successfully for the first time. This technical focus is evident from its very opening:

(1) In this study, we have successfully cloned cynomolgus monkeys *(Macaca fascicularis)* by somatic cell nuclear transfer (SCNT). We found that injection of H3K9me3 demethylase *Kdm4dmRN A* and treatment with histone deacetylase inhibitor trichostatin A at one-cell stage following SCNT greatly improved blastocyst development and pregnancy rate of transplanted SCNT embryos in surrogate monkeys.[25]

The whole article discusses technical problems and describes procedures and solution, in highly technical terms with a very high lexical density. For instance, in only ten randomly chosen lines in the paper the following terms were found: 'polarized-light imaging', 'spindle-chromosome complex oocyte', 'viral envelope', 'hemagglutinin', 'perivitelline space', 'fibroblasts', 'pronucleus', 'ionomycin', '6-dimethylaminopurine', 'I/D activated SCNT embryos', 'blastocysts'.

Only in the very last two sentences is there a brief comment indicating the ultimate purpose of the research, i.e. the advancement of research on human diseases:

(2) This is particularly relevant for developing monkey models for human diseases with defined genetic defects that could be used for studying disease mechanisms and testing potential therapeutic treatments. Basic studies on the genetic basis of primate-specific traits will find genetically uniform clones of non-human primates a useful laboratory animal model.

This statement, which is used also as an opening for the Summary (i.e. the abstract) preceding the article, defines clearly the aims of the research in terms of medical advancement, thus giving the lie to

[22] Mike Scott, *WordSmith Tools, version 6* (Liverpool: Lexical Analysis Software, 2012).
[23] Giuliana Garzone and Francesca Santulli, "What Can Corpus Linguistics Do for Critical Discourse Analysis?", in Alan Partington, John Morley, and Louann Haarman (eds), *Corpora and Discourse* (Bern: Peter Lang, 2004), 351-368. Gerlinde Hardt-Mautner, "Checks and Balances: How Corpus Linguistics Can Contribute to CDA", in Ruth Wodak and Michael Meyer (eds), *Methods of Critical Discourse Analysis* (London: Sage, 2009), 122-143.
[24] Zhen Liu et al., "Cloning of Macaque Monkeys".
[25] Italics in the original.

anyone who may think the research has other purposes, e.g. human cloning.

Attention will be now turned to popularising articles included in the corpus. An even cursory look at their headlines immediately identifies an important difference in approach between Western and Chinese news outlets. Headlines of Western news outlets, and in particular those of the British quality press, tend to emphasise British scientists' paternity of the technique applied, with their expertise thematised as the agent of the breakthrough, while Chinese researchers are not even mentioned:

(3) Science behind Dolly the Sheep creates monkey clones.[26]

(4) Dolly science creates monkey clones.[27]

Thus, in the British press apparently purely informative headlines are used respectively to question the 'real' Chinese primacy in this research area and to reaffirm British or, better, Western scientific hegemony.

Also in the body text, many articles, and especially those coming from British outlets, tend to give the announcement in non-specific terms, as an important step forward for science in general:

(5) The birth of two baby monkeys created *through the same procedure used to make Dolly the sheep* could take science closer towards cloning humans, according to experts.[28]

This is in sharp contrast with the Chinese press. Unsurprisingly, all Chinese media, i.e. various international editions of *China Daily, The Global Times* – a tabloid newspaper published under the auspices of the *People's Daily* – and wires of the Xinhua General News Service (the official state-run press agency of the People's Republic of China) prefer to have 'China' or 'Chinese researchers' in subject (and Theme) position in the headlines, thus underlining their country's merit in the discovery:

(6) China says it has cloned a monkey using non-reproductive cells, a 1st.[29]

(7) Chinese scientists clone two monkeys.[30]

(8) Behind the research: how Chinese scientists are first to clone macaques.[31]

Quite meaningfully in these headlines no mention is made of the fact that the method used by Chinese scientists is an improved version of the technique originally devised by the British scientists

[26] Oliver Moody, "Science behind Dolly the Sheep creates monkey clones", *The Times* (London, 24/01/2018), *www.thetimes.co.uk* (unless otherwise indicated, all websites were last visited on 10 August 2019).
[27] Ibid.
[28] Ibid., emphasis added.
[29] Zhang Zhihao, "China Says It Has Cloned a Monkey Using Non-reproductive Cells", *China Daily* (25/01/2018), *www.chinadaily.com.cn*.
[30] Chen Shasha and Shan Jie, "Chinese Scientists Clone Two Monkeys", *Global Times* (China, 26/01/2019), *www.globaltimes.cn*.
[31] Liu Wei and Luo Zhen, "Behind the Research: How Chinese Scientists Are First to Clone Macaques", *Xinhuanet* (30/01/2018), *www.xinhuanet.com*.

who created Dolly the sheep.

Similarly, in the body text, emphasis is given to the paternity of the successful experiment, not only referring to the scientists who carried it out, but attributing it to the whole country:

(9) *China became the first country* to clone a monkey using non-reproductive cells.[32]

The text clearly asserts the primacy of China in cloning research, emphasising the positive outcomes that may derive from the breakthrough, even if in some of the articles produced in China acknowledgement of the Dolly precedent is given, although without prominence. The elements that have emerged so far in this brief analysis indicate that in reporting on the Chinese breakthrough in non-human primate cloning each country attempts to attribute itself the most important role in the development of the procedure that has made it possible.

### 3.1 *Popularising strategies*

As far as the overall structure of the articles is concerned, after the lead, providing the most essential information, the next few paragraphs tend to follow a narrative pattern along two different lines: the history of primate cloning research, starting from the birth of Dolly the sheep, and the different stages of the current study that has led to the birth of the two macaques, often with an account of the trial and error process experienced along the path to the final positive outcome. These narratives are usually interspersed with quotations in the form of indirect or, more often, indirect citations.

In linguistic and cognitive terms, the topic is hardly accessible to the layman, as emerged clearly in the brief analysis put forth in §3. Hence the need to make recourse to popularising strategies, and in particular to the explanation strategies introduced in §2.1 above, although their frequency of use is somewhat lower than one might expected, and above all limited in the range of strategies enacted, with a prevalence of denomination and definition.

For instance, in terms of strategies retrievable by means of computer routines, a few similes can be identified, nine in all, introduced by 'similar' to illustrate the technique used to clone the two monkeys (e.g. "*similar to* the technology used to create sheep Dolly"; "a monkey created by splitting an eight-cell embryo into two, *similar to* the way twins are normally formed") and ten introduced by 'like' (e.g. "*like* when you erase the contents of a hard drive before adding new data", to describe epigenetic reprogramming).[33]

For denominations, there are as many as 44 entries of 'called' with a popularising purpose, for instance: "an early embryonic stage *called* a blastocyst", "a simpler method *called* embryo splitting", and 19 of 'known' with this meaning ("a process *known* as epigenetics", "a different technique *known* as somatic cell nuclear transfer"). Denominations are often accompanied by definitions, a combination that both provides readers with the designations of technical notions and makes them aware of what such designations refer to (e.g. "a technique in which"; "fibroblasts, which is a type of fetal cells").

[32] Zhihao, "China says it has cloned a monkey...".
[33] "It's a Horror Show: Peta about Cloning Monkeys in China", *CE Noticias Financieras English* (25/01/2018).

Relatively less frequent are exemplifications, with 'for example' appearing only 12 times (e.g. "*for example*, skin fibroblasts support epidermal cells"; "*for example*, mice and cats are easy to clone") and paraphrases, with 'that is' used only seven times, for example:

(10) The primates, two long-tailed macaques, were created by a nuclear transfer of somatic cells, *that is,* from cells of the tissue of an adult macaque primate, in a procedure carried out at the Neuroscience Institute of the Chinese Academy of Sciences in Shanghai (China).[34]

In addition to explicit popularisation strategies, other communicative options are deployed, first and foremost reduction and simplification, which involve re-elaboration and tailoring to the needs and abilities of the 'particular' audience (drawing on Perelman/Olbrechts-Tyteca)[35] to which it is addressed.

This emerges clearly if the explanation of the procedure and the aspects that determined its success – treatment with two specific epigenetic modulators and the use of fetal, rather than adult, fibroblasts – as set out in the original paper (see example (1) above) is compared with their description in any of the news articles.

While in some of the articles the explanation, however simplified, is adequate, naming and shortly describing the successful innovative procedures, followed by the specification that fetal cells have been used, in some other articles, the account of the experiment is greatly simplified, with very summary descriptions of the SCNT technique and no mention of the improvements that have made the experiment successful, as in the following case, where the two sentences quoted here below are the only technical information given:

(11) The process involves removing the nucleus from a healthy egg, and replacing it with another nucleus from another type of body cell. The clone becomes the same as the creature that donated the replacement nucleus.[36]

Although such an oversimplification may be justified by the fact that the article intends to focus on other aspects, e.g. the controversial issues associated with cloning, and in particular the possibility of human cloning and animal testing objections, the description of the procedure is so poor that makes it impossible for the reader to understand the real nature of the breakthrough.

This is an evident case of misinformation or – as Bell[37] called it, 'misreporting'. Of course, the operations of deletion, simplification, synthetisation and (re-)construction of knowledge necessary in the drafting of popular science articles are potential sources of alteration and distortion, so is the indispensable change in register, but popularization as a process ought to be subject to some kind of ethics that protects the lay public from misinformation and provides it with the elements necessary to form an opinion, above all when the subject matter is very sensitive, as in the case of primate cloning.

[34] Ibid.
[35] Chaïm Perelman and Lucie Olbrechts-Tyteca, *The New Rhetoric: A Treatise on Argumentation* [1958], trans. by John Wilkinson and Purcell Weaver (Notre Dame, London: University of Notre Dame Press, 1969), 31.
[36] Nick Whigham, "Chimps off the Old Block", *The Daily Telegraph* (Australia), 26/01/2018.
[37] Allan Bell, *The Language of News Media* (Oxford: Polity, 1991), 216.

## 4. Representation of Problems and Ethical Issues

Attention will now shift to how controversial ethically relevant issues are dealt with in the articles. Virtually all the texts included in the corpus do recognise that the successful experiment and the availability of viable techniques to clone primates is not unproblematic.

As a quote cited in a *Telegraph* article states categorically:

(12) Prof Darren Griffin, professor of genetics at the University of Kent, said: "The first report of cloning of a non-human primate will undoubtedly raise a series of ethical concerns, with critics evoking the slippery slope argument of this being one step closer to human cloning"[38]

The journalist uses this quote by a real expert to highlight the controversial character of the breakthrough: recourse to the adverbial of stance 'undoubtedly' reinforces the idea that the new successful primate cloning procedure determines concern, the reference to *critics* points out by presupposition that there have been negative views and the observation on the 'slippery slope argument' clarifies the kind of reservations that detractors express.

This approach is recurrent in the corpus, with texts frequently featuring evaluative expressions articulating an attitude towards cloning, in particular 'concern*' (62 hits), 'question*' (64 hits), 'dilemma*' (17 hits) and 'fear*' (49 hits). All these words occur frequently in collocation with the verbs 'raise', 'prompt', and 'address'. In particular, with 'raise' and 'prompt' they tend to occur in object position, with the subject being a noun or phrase referring to the successful experiment, like 'the step', 'the research', 'the work', 'the clone breakthrough', or a full periphrasis (e.g. "The first report of cloning of a non-human primate", "The birth of the now six and eight-week old macaque babies", etc.). See the following examples:

(13) But while the success marks a breakthrough in cloning research, it also *raises major ethical questions*.[39]

(14) The research has *raised some serious ethical concerns* that this could lead to the cloning of humans.[40]

(15) Whole labs full of genetically identical macaques can now be created – *prompting fears* about the ramifications of humans being replicated.[41]

The collocation 'rais*' + 'concern*' is the most frequent (19 times), with 'concern*' in various positions (R1, R2, R4 – as in the example above –, R5, i.e. one, two, four or five 'slots' away to the right of the verb form).

[38] Sarah Knapton and Vedika Bahl, "First Monkeys Cloned in Historic Breakthrough: Could Humans Be Next?", *The Telegraph* (24/01/2018), *www.telegraph.co.uk*.
[39] Alexandra Richards, "Two Monkeys Are World's First Primates to Be Cloned from Transfer DNA Technique behind Dolly the Sheep" (24/01/2018), *Evening Standard*, *www.standard.co.uk*.
[40] Shivali Best, "Scientists Successfully Clone Two MONKEYS by the Same Method Used to Create Dolly the Sheep in a World First", *Mirror* (24/01/2018), *www.mirror.co.uk*.
[41] Andrew Griffin, "Monkeys Cloned in World First, Scientists Reveal", *The Independent* (24/01/2018), *www.independent.co.uk*.

'Question/s' is often found also in object position, being preceded by *pose*:

(16) However, some of his peers [of Qiang Sun, one of the authors] said that the manufacture of identikit monkeys for research *would pose awkward ethical questions.*[42]

Noteworthy in this example is the use of the adjective *awkward*, which emphasises the trickiness of the issue at hand. Another frequent collocate of 'question*' is 'address*', which appears mostly in the passive in the pattern 'question* need to be addressed', as in the following sentence:

(17) The technique brings the prospect of cloned human beings closer, but scientists caution there may be no good reason to create such clones and that *ethical and legal questions need to be addressed*.[43]

These evaluative words are in many cases preceded by an adjective, the most frequent being 'ethical' ('ethical concerns': 29 hits; 'ethical questions': 17 hits; 'ethical dilemmas': 10 hits) which in the case of 'question*' is sometimes combined with 'legal' ('ethical and legal questions', 14 hits), thus clearly establishing the ethical character of the issues at hand.

The word 'fear', which is used in contexts very similar to those of 'question' and 'concern', is however rather different from them in semantic terms, as it does not express a rational evaluation of the experiment being reported on, but rather an emotional state caused by a perception of danger associated with it. This helps explain why it is never preceded by the adjective 'ethical' (in only one headline there appears the phrase 'ethics fear').[44] See the following examples:

(18) But the breakthrough will inevitably raise fears that human cloning is closer than ever.[45]

(19) Scientists yesterday unveiled two cloned monkeys – prompting fears from critics the technique will be used to create humans.[46]

There are reasons to believe that in this context the use of the word 'fear' is aimed at sensationalising the information given, playing on people's being scared of anything that breaks the ordinary order of things. It appears in articles from various newspapers, with the most insistent use in *The Sun* in its various editions, but also in the *Independent,* the *Daily Telegraph*, the *Express*, the *Scottish Express*, *Metro*, and in releases from news outlets like *NPR* and *BGR*. In actual fact the word 'fear', with its irrational emotional semantic load, is never used in general terms, or to refer to animal tests, but only with reference to the probability of human cloning being carried out.

[42] Andy Coghlan, "Say Hello to Cloned Monkeys", *The New Scientist* (24/01/2018), *www.sciencedirect.com*.
[43] Andrew Griffin, "Human Cloning Moves Closer", *The Queensland Times* (26/01/2018), *www.questia.com*.
[44] Sarah Knapton, "World's First Cloned Monkeys: Clone Breakthrough Raises Ethics Fears", *The Daily Telegraph* (25/01/2018), *www.telegraph.co.uk*.
[45] Coghlan, "Say hello to cloned monkeys".
[46] Shaun Wooller, "MONKEY CLONE BREAKTHROO-OO; HUMAN COPIES NEXT FEAR", *The Sun* (England, Edition 2, 25/01/2018), capitals in the original.

Having outlined the main discursive frames associated with ethical reserves and worries about primate cloning experiments, attention will now concentrate on the discursive representation of the specific ethical questions dealt with.

As already pointed out, the issues raised by the success in macaque cloning fall within two main areas, which emerge very well in the following statement by scientist Philip Ball's editorial in the *Guardian*:

(20) Such *biomedical use of primates* [to study the genetic factors behind diseases] is fraught with ethical issues of its own – it is of course *the very closeness of the relationship to humans* that makes such research more informative but also more disturbing.[47]

In Ball's view, the first order of problems regards the procedure of manipulating animals genetically for study purposes ('biomedical use of primates'), i.e. the ethics of research on animals, the second one is the possible extension of the successful procedures to human cloning, which is even more dramatic. This is why here the discussion will first focus on the latter issue.

### 4.1 *Human cloning*

As far as the first of such problematic areas is concerned, it is quite obvious that there could be expectations that success with non-human primates may soon be followed by the cloning of humans, an issue which is discussed or at least hinted at in most articles, as is proved by the fact that the lemma 'human' has 758 entries, 508 of which refer specifically to cloning (for instance, 'research on human clones', 'closer to human cloning', 'to clone a human', 'making human beings by cloning', 'making a human baby by cloning', etc.).

In many cases the ability to clone humans is discursively represented as the ultimate target of research in this area, making recourse to metaphors of movement and progress. In some cases, it is described as a step forward, e.g.:

(21) And the breakthrough brings the world a step closer to human cloning.[48]

or a leap forward:

(22) At the same time, scientists have expressed concern the leap from cloning monkeys to humans is a narrow one. (*Daily News*, New York)[49]

or as the removal of barriers that impede advancement:

[47] Philip Ball, "How Afraid of Human Cloning Should We Be?", *The Guardian* (25/01/2018), *www.theguardian.com*.
[48] Henry Holloway, "Humans Next? Monkey CLONES Born in Major Scientific Breakthrough", *Daily Star Online* (24/01/2018).
[49] Joe Dziemianowicz, "Tail Of 2 Monkeys. Historic Primate Cloning in China", *Daily News* (New York, 25/01/2018).

(23) The world's first genetically identical monkey clones have been created by Chinese scientists, who say they've broken barriers to human cloning. (*Qatar Tribune*).[50]

or as an action that proactively contributes to progress towards the goal of cloning humans, thus raising worries:

(24) Dr David King, director of the lobby group Human Genetics Alert, said: "We are concerned that this is a *stepping stone* to the creation of human clones". (*The Sun*).[51]

To support this statement, King sees a scientist's ambition to be first as the possible motivation to attempt human cloning, followed by economic attractiveness:

(25) Although it looks technically difficult, those with enough financial resources and the ambition to be the first to create a cloned child are likely to try ... There would undoubtedly be a market for human clones.

It is to be noted that in many cases this kind of stance-taking commentary on the successful cloning experiment is presented in the form of a quotation from an expert's declaration. In this way the various positions are given more credit and authoritativeness, being put forth by insiders, but at the same time reliance on quotations functions as a hedge to the journalists' responsibility for the notions put forth.

Another argument questioning the ethical admissibility and lawfulness of human cloning is the chance that "rogue scientists" may get hold of the procedure and use it "in a celebrity-driven world".[52] A further point is the unsafe status of the procedure, which is discussed in explicitly ethical terms, quoting from Professor Robin Lovell-Badge, a cloning expert:

(26) "Careful consideration now needs to be given to the ethical framework under which such experiments can, and should, operate.... It would be far too inefficient, far too unsafe, and it is also pointless."[53]

Quite interestingly, the arguments denying the imminent likelihood of human cloning are not based on principles, but more often on practical considerations, or on scientists' declarations denying that current expertise is adequate and safe to clone humans:

(27) But both the scientists and other experts say it's highly unlikely this advance will result in human clones in the foreseeable future.[54]

[50] "First Monkeys Cloned from Process that Created 'Dolly' the Sheep", *Qatar Tribune* (28/01/2018).
[51] Wooller, "MONKEY CLONE BREAKTHROO-OO...".
[52] Rob Stein, "Chinese Scientists Clone Monkeys Using Method That Created Dolly the Sheep", *NPR All Things Considered* (24/01/2018), *www.npr.org*.
[53] Victoria Allen, "ONE STEP CLOSER TO HUMAN CLONES", *Scottish Daily Mail* (25/01/2018).
[54] "First Monkeys Cloned from Process".

or they deny the willingness to clone humans, referring to the various obstacles to the implementation of the practice:

(28) The technical barrier to reproductive cloning is in principle broken, Poo said, but societal taboos, ethical concerns and governmental prohibitions remain intact.[55]

Noteworthy here is the explicit recognition of the ethical character of the concerns raised by the cloning practice, which is not frequent in the corpus. In actual fact, there is only one case in the corpus in which the practice of human cloning is openly declared unethical, in an article published in the *New Scientist*, and written by Marcy Darnovsky, Director of the Center for Genetics and Society in the US, which takes a clear stance against cloning experiments on humans:

(29) Subjecting a human to the dire risks shown in animal cloning – including in monkeys – would represent *unethical human experimentation*. So, too, would the psychological and emotional risks faced by a cloned child.... Human cloning also comes with other unwarranted health risks: to the many women who would need eggs extracted, and to the dozens needed as surrogates for clone pregnancies, which have posed serious dangers in some species.[56]

Reservations against human cloning include criticisms of the possible outcomes of the practice, as pointed out in the transcript of the news programme *All Things Considered* on *NPR*, which is widely quoted in many of the articles analysed here:

(30) George Daley: "Cloning one individual in the image of another really sort of demeans the significance of us as individuals. There's a certain sort of gut sense that it violates sort of a natural norms."[57]

Furthermore, expectations of obtaining a perfect copy of the cloned subject are only wishful thinking:

(31) realistically a clone would only be somewhat similar to the individual they came from. They would be less similar than an identical twin [said Darren Griffin, professor of genetics at the University of Kent].[58]

(31) "We do need to think about not only is it not acceptable, but it is a bit pointless anyway," said Darren Griffin, professor of genetics at the University of Kent. "What are people trying to achieve if they attempted to do that? Because realistically a clone would only be somewhat similar to the individual they came from. They would be less similar than an identical twin: Scientists will keep watch on Zhong Zhong and Hua Hua, who for now appear to be growing and developing like normal monkeys. They expect more clones to be born in the coming months."

[55] Ben Guarino, "Researchers Clone the First Primates from Monkey Tissue Cells", The *Washington Post* (24/01/2018), *www.washingtonpost.com*.
[56] Marcy Darnovsky, "Say No to Human Clones", *The New Scientist (*31/01/2018), *www.sciencedirect.com*.
[57] Stein, "Chinese Scientists Clone Monkeys Using Method That Created Dolly the Sheep".
[58] Griffin, "Monkeys Cloned in World First, Scientists Reveal" (24/01/2018), *The Independent*, *www.independent.co.uk*.

Although only some of these considerations are specifically framed in ethical terms, the final conclusion of the debate, as argued by Darren Griffin, is that "careful consideration now needs to be given to the ethical framework under which such experiments can, and should, operate."[59]

4.2 *Animal testing ethics*

As already pointed out, the declared purpose of non-human primate cloning is essentially the willingness to study human diseases on animals that are as similar to humans as possible:

(32) The aim of the scientists was to open the door to populations of genetically uniform monkeys that can be customised for ground-breaking research into human diseases.[60]

In some of the articles, some specific diseases are also mentioned – Alzheimer's, Parkinson's, heart disease, metabolic syndrome, even autism.

A further advantage alluded to is the possibility of gene-editing the primates being studied, to obtain populations that make it possible to investigate certain disorders which are otherwise impossible to understand. As Dr. Qian Sun, director of the Nonhuman Primate Research Facility, one of the scientists involved in the experiment, explains: "You can produce cloned monkeys with the same genetic background except the gene you manipulated".[61] In addition, according to scientists, thanks to the availability of cloned monkeys fewer animals would be involved in experiments, as specified in a Xinhua General News Service wire, relayed by various news outlets:

(33) Poo said the importance of cloning macaques with the same genes was to reduce the number of farmed animals for experiments. "Researchers used to use more animals for drug test for accuracy, but now we could change the situation with cloning technology," he said.

But in some of the articles, e.g. in *The Sun*, which takes an obviously conservative attitude to the question, the prospect of creating better and more largely available animal models of disease for medical research is defined worrying in itself:

(34) But worryingly, the scientists say they now want to create "customisable" populations of monkeys for large-scale animal testing.[62]

Here, the adverbial of stance 'worryingly' signals the problematic character of the action described. The article, whose headlines meaningfully start with the word 'monstrous' in capital letters,

[59] Allen, "ONE STEP CLOSER TO HUMAN CLONES".
[60] John von Radowitz, "Cloned Monkeys a 'Stepping Stone' to Copied Humans" (25/01/2018), *The Irish Independent*, *www.independent.ie*.
[61] Holloway, "Humans Next? Monkey CLONES Born in Major Scientific Breakthrough".
[62] Sean Keach, "MONSTROUS' First MONKEY CLONES Made by Dolly The Sheep Method Slammed as 'Horror Show' by Animal Welfare Experts", *The Sun* (24/01/2018), *www.thesun.co.uk*.

then goes on to describe and discuss some of the issues quoting statements from Dr. Qiang Sun illustrating the rationale underlying this type of research, but subsequently gives ample space to reporting the views of those who oppose animal cloning strongly. In particular, it reports the views of Dr Julia Baines, Science Policy Adviser for animal rights organisation PETA (People for the Ethical Treatment of Animals Association) UK:

> (35) Experimenters constantly receive funds to perform monstrous experiments on animals, and cloning monkeys is the latest Frankenscience that PETA condemns.... Cloning is a horror show: a waste of lives, time and money – and the suffering that such experiments cause is unimaginable.[63]

The language used by the PETA expert is obviously sensational, reinterpreting cloning experiments in Gothic terms with reference to horror and Frankenstein (the latter reference also appearing in a *Noticias Financieras* article of 25 January). The second part of the quote, with the striking expression 'horror show', coming from an official statement by PETA, is not only cited by the *Sun* in its various editions, but also – exactly with the same wording – by various other outlets, the *Independent*, *Noticias Financieras,* the *Daily Telegraph* and its online edition *telegraph.co.uk*, the *Global Times* and two Australian outlets, *Courier Mail* and *Gold Coast Bulletin*, some of which use it for their headlines.

Quite interestingly, the statement is in some cases attributed to another PETA expert, Kathy Guillermo, senior vice president of the organisation in the US, thus confirming the inaccuracy of the information given. The *Sun* also adds a citation from Penny Hawkins, spokesperson of British animal welfare charity RSPCA (Royal Society for the Prevention of Cruelty to Animals), who explains that there are "huge ethical and animal welfare concerns about this. These are living animals, not just research tools",[64] thus highlighting the essentially ethical character of the issue being debated. Animal welfare advocates' main argument is that experiments on animals are not really necessary nor useful for research and that cloning has a very high failure rate, thus inflicting suffering to a huge number of animals, over 100 million each year, according to Hawkins.

Furthermore, there are reservations as to the health status of cloned monkeys, since the first generations of animals of that type often suffer from diseases: "This raised questions about the long-term health of clones, and added fuel to the fire of those who considered cloning to be unethical".[65] The question of animal welfare is also touched upon in a dispatch issued by the Xinhua General News Service (30/01/2018), which attributes negative evaluations to "some animal welfare activists in China and abroad [who] have been critical".[66] But quite obviously Chinese outlets tend to minimize the problem.

Over one third of the articles in the corpus report reassuring declarations by the scientists involved who declare they are following "strict international guidelines for animal research, set by the US

[63] Ibid.
[64] Ibid.
[65] Josh Gabbatiss, "Dolly the sheep: 15 years after her death, cloning still has the power to shock" (14/02/2018), *The Independent*, *www.independent.co.uk*.
[66] Liu Wei and Luo Zhen, "Behind the Research: How Chinese Scientists Are First to Clone Macaques".

National Institutes of Health" (e.g. *The Sun,* 24/01/2018; *standard.co.uk,* 24/01/2018; *The Independent,* 24/01/2018, *Express online,* 24/01/2018; and a number of local newspapers).

At the same time they recognise that observance of strict ethical standards is a *sine qua non* for the continuation of experiments in the future:

(36) Study co-author Dr Muming Poo said: "We are very aware that future research using non-human primates anywhere in the world depends on scientists following very strict ethical standards" (*The Sun*)[67]

Thus, in the representation of the critical issues surrounding the future or primate cloning, the issue of animal testing qualifies as an important factor.

## 5. Conclusions

This article presents the analysis of a corpus of news articles focusing on the announcement of the success of an experiment of primate cloning leading to the birth of two cloned monkeys. In terms of dissemination of scientific knowledge, the analysis shows that accuracy does not seem to figure among the priorities of journalists, as already pointed out in previous research,[68] and this is confirmed among other things by the relatively limited recourse to standard popularisation strategies found in the texts. Furthermore, in hardly any of the articles are the real novelties characterising the experiment reported and explained with precision, so the reader is not adequately informed about the state of the art. This is all the more objectionable in terms of journalists' professional ethics in consideration of the sensitive character of the scientific advances at issue.

A question that receives unexpected attention in the news articles, especially in British and Chinese news outlets, is the actual paternity of the breakthrough, with Britain claiming a big share of the merit for the advance on account of having developed the basic cloning technique originally used for Dolly, and China claiming credit for the improvements of the technique that led to the successful cloning of the two macaques.

As far as the representation of ethical issues connected with primate or even human cloning is concerned, all articles express concern or fear, but only rarely do they actually discuss the nature of those concerns in depth. There are worries that a market for clones should arise, and the only idea of experimenting with human clones is seen as unethical. Only in very few cases is one of the main arguments usually brought against human cloning, i.e. jeopardy to every individual's uniqueness, brought up. The other main concern regards intensive animal experimentation, for which precise rules are invoked.

In textual terms, it is especially interesting that rather than reporting the various stances, journalists prefer to rely on citations from experts, which relieves them from articulating complex positions and more or less explicitly subscribing to points of view, in a context where information is difficult to evaluate for the layman and ideology has an important role in opinion formation.

[67] Keach, "MONSTROUS' First MONKEY CLONES Made by Dolly the Sheep Method".
[68] Garzone, "News Production and Scientific Knowledge: Exploring Popularization as a Process".

Jekaterina Nikitina

# Representing Gene-Editing in Newspapers. Between Science Dissemination and Fantasy[1]

**Abstract**: This paper investigates the popularised representations of gene-editing in the British broadsheets and tabloids over the two-year period 2017-2018. The basic assumption is that news reports serve as an important channel for dissemination of knowledge about gene-editing and are likely to influence the public opinion on this technology by constructing news stories in an interpretative way. This study sets to examine how tabloids and broadsheets frame gene-editing and genetic researchers linguistically and discursively, focusing on the selective representation of claims and the imagery associated with applications and implications of gene-editing. The methodological framework adopted is that of Corpus-Assisted Discourse Analysis. WordSmith Tools 6.0 software is used for lexical analysis and text search. The results indicate a convergent tendency of tabloids and broadsheets to explain and categorise the technology in a careful way, with tabloids relying more often on the quotes and attributions of scientists, and a divergent tendency in the use of loaded imagery.

Keywords: *corpus-assisted discourse analysis*, *gene-editing*, *newspapers*, *popularisation*

## 1. Introduction

Genetic breakthroughs have always mesmerized both the scientific community and the general public. Scientific advancements of the 1990s, with the first cloning case, and the 2000s, with the conclusion of the Human Genome Project, were widely overviewed by the popular press. Public perception fluctuated between hopes for new treatments and fears of the unknown. In general, the development of scientific knowledge which has consistently involved human intervention on nature was always met with a nervously ambivalent reaction, as it was perceived as tampering. Starting from the release of Mary Shelley's *Frankenstein* in 1818, the popular culture seemed to have imprinted on the image of Frankenstein,[2] which successfully resurfaced whenever advancements of bioscience appeared to breach some invisible boundaries[3] – be it the cloning of Dolly,[4] the applications of genetically modified foods[5] or the most recent technology of gene-editing. As a result, geneticists historically were eager to collaborate with the mass media as they wanted to promote a positive image of their

[1] This study contributes to the national research programme "Knowledge dissemination across media in English: continuity and change in discourse strategies, ideologies, and epistemologies", financed by the Italian Ministry of Education, University and Research for 2017-2019 (nr. 2015TJ8ZAS).

[2] Jon Turney, *Frankenstein's Footsteps: Science, Genetics and Popular Culture* (New Haven: Yale U.P., 1998).

[3] Henk van der Belt, "Playing God in Frankenstein's Footsteps: Synthetic Biology and the Meaning of Life", *Nanoethics*, 3.3 (2009), 257.

[4] Gina Kolata, *Clone: The Road to Dolly and the Path Ahead* (London: Allen Lane, 1997).

[5] Jennifer McGee, "Weird Science: Frankenstein Foods and States as Laboratories of Democracy", *Journal of Law and Health*, 30.1 (2017), 111.

work and to contrast the negative association of genetics with eugenics.[6] In this endeavour, the language of genetics became strongly associated with metaphors, since both researchers and journalists were aware of the potential of metaphors to facilitate the understanding of science.[7] Geneticists themselves created and deployed "a striking range of metaphors to promote their science, suggest its meanings and persuade the public of its value to health care and social policy".[8] The metaphors were "quickly migrating to these popular media, thus influencing public opinion"[9] and often amplifying the image to fashion a bigger public resonance.

Representations of the genome have coalesced into the image of a written document, a book, a text or a code,[10] which is framed in terms of a mystery to be unveiled, discovered and decoded. By contrast, the new technology of gene-editing has only just started to generate a specialised terminology and imagery suited to convey such a novel concept.[11] The discourse of gene editing is still lacking a standard codification despite the fact that the technology itself is known to the general public: in a recent demographic study on the perception of gene-editing conducted in 185 countries in 2015 only 12.1% of respondents were not familiar with the technology before the survey.[12] In 2017 experts lamented language-related problems with labelling gene-editing[13] and with making it understandable to the public, including "(1) the ethical complexity of the technology; (2) an accurate description of the technology, how it works, and how it can be used; and (3) what is known and unknown about its potential consequences".[14] Such language-related problems, which are mirrored by unstable representations in popularised press, might hinder its effective regulation, because law has to rely on language. In fact, the European Court of Justice has banned the use of gene-editing in agriculture in Europe as a kind of genetic modification.[15] Although the label is similar, the underlying technology is different. Experts believe that a better understanding through linguistic means would be "the major determinant for public perceptions of human gene editing"[16] and observe that "public education is of great significance in this area".[17]

Media discourse on gene-editing is a privileged site for exploring the diverse and complex representations of this progress in genetics. Since media discourse plays a significant role in influencing public opinion, investigating discursive representations of gene-editing may help shed

[6] Dorothy Nelkin, "Promotional Metaphors and Their Popular Appeal", *Public Understanding of Science*, 3.1 (1994), 25-26.
[7] José Van Dijck, *Imagenation: Popular Images of Genetics* (New York: New York U.P., 1998), 23.
[8] Dorothy Nelkin, "Molecular Metaphors: The Gene in Popular Discourse", *Nature Reviews Genetics*, 2.7 (2001), 556.
[9] Meaghan O'Keefe et al., "'Editing' Genes: A Case Study About How Language Matters in Bioethics", *The American Journal of Bioethics*, 15.12 (2015), 3.
[10] Nelkin, "Gene in Popular Discourse"; Brigitte Nerlich and Iina Hellsten, "Genomics: Shifts in Metaphorical Landscape", *New Genetics and Society*, 23.3 (2004), 255-268; Niklas Pramling and Roger Säljö, "Scientific Knowledge, Popularisation, and the Use of Metaphors: Modern Genetics in Popular Science Magazines", *Scandinavian Journal of Educational Research*, 51.3 (2007), 275-295.
[11] O'Keefe, "Editing Genes", 3.
[12] Tristan McCaughey, "A Need for Better Understanding Is the Major Determinant for Public Perceptions of Human Gene Editing", *Human Gene Therapy*, 30.1 (2019), 39.
[13] Sara Wells and Jean Stéphane Joly, "The Trouble with Collective Nouns for Genome Editing", *Mammalian Genome*, 28.7 (2017), 365-366.
[14] O'Keefe, "Editing Genes", 4.
[15] Case C-528/16, Judgment of the European Court of Justice (Grand Chamber) of 25 July 2018, curia.europa.eu.
[16] McCaughey, "Understanding Human Gene Editing", 36.
[17] Ibid., 41.

light on the way in which this technique is popularised with the public in order to foster its acceptance.

The pace and relevance of genetic advancements in the last 30 years have contributed to the prominence of gene-related stories in mass media,[18] and gene-editing is not an exception. The contemporary media could be said "to operate at the interface between genetic researchers and the public ... shaping public perceptions of genetics and its value and applications, by selectively presenting some subthemes and not others".[19] While it would be naïve to claim that media influence is straightforward and simple, the potential of media discourse to promote positions of power and ideologies has long been established,[20] and can be assumed to impact the social construction of genetic editing.

The interaction between science and the media has been traditionally studied in terms of its transmission mechanism, conceptualised as 'science popularisation'. Initially, such studies focused on the accuracy of 'translation' of specialist knowledge for a non-specialist audience[21] in a one-way direction, to render it accessible to the 'ignorant' layman. Later research rejected this unidirectional model and proposed a more interactive view on popularisation, where the public took on a more active role in knowledge processing, making popularisation "a matter of interaction as well as information".[22] Modern studies of popularisation view it as a process of re-contextualisation of academic knowledge, which involves complex linguistic and discursive re-elaboration to tailor it to the interests and backgrounds of the receiving audience.[23]

The popularisation of science in mass media, and more specifically, in newspapers[24] is not devoid of manipulations and selectivity. On the one hand, journalists – who may find science intimidating,[25] not have the skills to critically evaluate it[26] or simply be under an imminent deadline pressure – extract information for further re-contextualisation from trusted sources, without any further checks. On the other hand, popularised science maintains the nature of journalistic discourse, which strives to amplify public response by highlighting the most newsworthy elements, often independently of their scientific relevance, just "to arouse as much interest as possible in readers".[27] At times the newsworthiness-based selection bestows a sensational flavour to genetic news and produces fantasy-like descriptions of genes. Apart from the Frankenstein imagery, one of the most notorious cases concerns the so-called "gay gene": when the British media reported on a link between genetics

[18] Alan Peterson, "Biofantasies: Genetics and Medicine in the Print News Media", Social Science and Medicine, 52.8 (2001), 1255.
[19] Ibid., 1256.
[20] Norman Fairclough, *Media Discourse* (London: Edward Arnold, 1995).
[21] Stephen Hilgartner, "The Dominant View of Popularization: Conceptual Problems, Political Uses", *Social Studies of Science*, 20 (1990), 519-539.
[22] Ibid., 273.
[23] Garzone, "Popularization as a Process", 77.
[24] Ken Hyland, "Constructing Proximity: Relating to Readers in Popular and Professional Science", *Journal of English for Academic Purposes*, 9 (2010), 116-127; also Garzone, "Popularization as a Process".
[25] Petersen, "Biofantasies", 1257.
[26] Robert Logan, "Popularization versus Secularisation: Media Coverage of Health", in Lee Wilkins and Philip Patterson, eds., *Risky Business: Communicating Issues of Science, Risk and Public Policy* (New York: Greenwood, 1991), 47.
[27] Giuliana Garzone, "News Production and Scientific Knowledge: Exploring Popularization as a Process", in Giuditta Caliendo and Giancarmine Bongo, eds., *The Language of Popularization: Die Sprache der Popularisierung* (Bern: Peter Lang, 2014), 91.

and male homosexuality.[28] Similarly, media have dubbed other genes in a personified and somewhat fantastic way, extending images conveyed by scientists and attributing social qualities to genetic markers: in addition to gay genes, there would be obesity genes, risk genes, violence genes, genes for saving, genes for directional ability and genes for sinning[29] and even piano-playing genes.[30] Consequently, gene-editing representations in newspapers balance between popularisation processes and media framing, which invites to construe gene-editing in a certain way by the selective arrangement of information.[31] The framing typically emphasises either the risks or the benefits of biotechnology.[32] Finally, gene-editing representations in press are subjected to the journalistic strive to create an appealing story for readers.

## 2. Study Design

This study aims to investigate the representations of gene-editing, its applications and scientists-geneticists in popular UK press over the two year period 2017-2018. The basic research objective is to assess how British tabloids and broadsheets frame linguistically and discursively gene-editing, genetic researchers and the results of their work, focusing on the selective representation of claims and the imagery associated with them.

The research adopts the method of Corpus-Assisted Discourse Analysis[33] combining Discourse-Analytical perspective and Corpus Linguistics quantitative possibilities. The data compilation stage took inspiration from Discourse-Historical Approach (DHA).[34] As DHA explores multifaceted phenomena in the society, "taking a whole range of empirical observations, theories and methods as well as background information into account",[35] the regulatory and socio-political setting of the UK was taken into consideration to contextualise the data gathered. The choice to focus on British newspapers in this period was dictated by the changing regulatory context of the United Kingdom. The UK Government is actively promoting the state's excellence in life sciences, with a strong focus on integration of genomics and gene-editing into the national health system[36] in order to solidify the state's position as a world leader in genomics. According to the UK Government, the country would benefit "from a regulatory landscape that allows the application of genome editing

[28] David Miller, "Introducing the 'Gay Gene': Media and Scientific Representations", *Public Understanding of Science*, 4.3 (1995), 269-284.
[29] Nelkin, "Gene in Popular Discourse", 557.
[30] From this corpus.
[31] Petersen, "Biofantasies", 1258; Anders Hansen, "Claims-making and Framing in British Newspaper Coverage of the 'Brent Spar' controversy", in Stuart Allan et al., eds., *Environmental Risks and the Media* (London: Routledge, 2000), 55-56.
[32] Leonie Marks et al., "Mass Media Framing of Biotechnology News", *Public Understanding of Science*, 16.2 (2007), 185-186.
[33] Paul Baker, Using Corpora in Discourse Analysis (London: Continuum, 2006); Paul Baker et al., "A Useful Methodological Synergy? Combining Critical Discourse Analysis and Corpus Linguistics to Examine Discourses of Refugees and Asylum Seekers in the UK Press", *Discourse and Society*, 19.3 (2008), 273-306. Alan Partington et al., "Corpora and Discourse, a Most Congruous Beast", in Alan Partington et al., eds., *Corpora and discourse* (Bern: Peter Lang, 2004), 11-20.
[34] Ruth Wodak and Martin Reisigl, "The Discourse-Historical Approach (DHA)", in Ruth Wodak and Michael Meyer, eds., *Methods of Critical Discourse Analysis* (London: Sage, 2009), 87-121.
[35] Ibid., 90.
[36] The UK Government Response to the House of Commons Science and Technology Committee's Third Report of Session 2017-19, "Genomics and Genome Editing in the NHS", July 2018, 1. Available at assets.publishing.service.gov.uk.

technology for a wide range of applications".[37] Currently, gene editing is an established tool in biological research in the UK: the technology is being developed for therapies involving somatic genome editing. In addition, the State has embraced a permissive approach to human genome editing in embryos or gametes for research purposes under licence from the Human Fertilisation and Embryology Authority (HFEA).[38] Notably, after Brexit the country will not be bound by a more restrictive EU legal framework, which could lead to a wider use of gene-editing, undoubtedly affecting the population. As a result, the public has to be duly informed about this new technology. Yet, the role of newspapers in the dissemination of knowledge on gene-editing has yet to be assessed. How are gene-editing and geneticists portrayed to the general public? Can we talk about a neutral or one-sided science representation? Is gene-editing depicted in the same way in broadsheets and tabloids, or do different readers receive different stories? This study attempts to provide a tentative answer to these questions.

The corpus for the study was compiled using the online search engines of individual tabloids (*Daily Mail* and *Mail on Sunday*, *London Evening Standard*, *Daily Mirror* and *Sunday Mirror*, *The Sun*) and broadsheets (*Daily Telegraph* and *Sunday Telegraph*, *The Times* and *the Sunday Times*, *The Guardian/The Observer*). The newspapers were selected based on their popularity and free availability, as the idea was to assess the potential impact of newspapers on the British public at large. This search employed the multiword terms "gene-editing" and "genome editing" in the period between a) 1 January 2017 and 31 December 2017 ("2017") and b) 1 January 2018 and 21 January 2019 ("2018").[39] A two-part corpus was compiled (see Table 1), comprising 166 broadsheet articles amounting to 115,937 words, and 149 tabloid articles amounting to 89,313 words. In order to make the numbers comparable, all data were normalised to 100,000 words. The significant frequency cut-off is set at 30 occurrences per 100,000 words, i.e. 0.03%.

| Type | Broadsheets | | Tabloids | |
|---|---|---|---|---|
| Year | 2017 | 2018 | 2017 | 2018 |
| No. articles | 69 | 97 | 74 | 75 |
| No. words | 50,104 | 65,833 | 38,491 | 50,844 |
| Total no. article | 166 | | 149 | |
| Total no. words | 115,937 | | 89,313 | |
| Normalisation base | 100,000 | | 100,000 | |

Table 1: Corpus composition

This research started from a pre-formed objective to assess the portrayal of the technology ('gene-editing' and 'genome editing') and its applications, along with people involved in its implementation ('scientists', 'researchers' and 'geneticists'), formed during the initial close reading of the documents at the corpus compilation stage. However, additional mapping of the corpus using the

[37] Ibid., 13.
[38] Ibid.
[39] A period of three weeks in the beginning of January 2019 was added to the 2018 corpus to guarantee recency. The number of texts dated January 2019 is minor and does not leave a notable impact on the findings.

corpus linguistics software Wordsmith Tools 6.0 was carried out to quantify and pinpoint other statistically relevant areas of interest, because Corpus Linguistics, to rephrase Partington, in addition to confirming the already noted phenomena has the potential to unveil "patterns of use previously unthought of".[40] Corpus technology was used for the study of concordances, patterns and key words, and CDA notions were applied to group, categorise and analyse findings.

Specifically, the research adopted the classification of discursive strategies developed by Critical Discourse Analysis in the DHA vein:[41] nomination (for the discursive construction of gene-editing and its stakeholders), predication (for the negative or positive discursive qualification of gene-editing technology and geneticists), argumentation (including topoi and/or fallacies for justification of positive or negative traits) and perspectivation or framing (to assess the opinions expressed with regard to gene-editing or geneticists).[42]

## 3. Findings

### 3.1. *Explaining and describing gene-editing*

As the recent international scientific events demonstrate, there is still no unanimous decision concerning the choice between the terms 'gene-editing' and 'genome editing'. Recently, two international summits on this topic took place. The first one, held in December 2015, was titled *International Summit on Human Gene Editing*, whereas the second one, held in November 2018, was denominated *Second International Summit on Human Genome Editing*. As the two versions are still used interchangeably, with no clear preference among the scientific community,[43] it was decided to use a wildcard with 'gen*' to search for suitable terminological candidates. Collocates of 'edit*' demonstrated that the technology is also frequently introduced by the abbreviation 'CRISPR', standing for 'clustered regularly interspaced short palindromic repeats'. The latter abbreviation was often further specified by the addition of 'Cas9' or 'Cas12'; however, not all texts deciphered the abbreviations.

| Nomination | BR | TB | categorisation | BR | TB | action | BR | TB |
|---|---|---|---|---|---|---|---|---|
| gen* editing | 471 | 682 | technology | 254 | 282 | change | 368 | 487 |
| CRISPR | 192 | 409 | technique | 132 | 208 | editing | 98 | 267 |
| | | | tool | 80 | 144 | mechanical | 239 | 468 |

Table 3: Gene-editing nomination, categorisation and action as explained in broadsheets (BR) and tabloids (TB)

[40] Alan Partington, *The Linguistics of Political Argumentation: The Spin-Doctor and the Wolf-Pack at the White House* (London: Routledge, 2003), 12.
[41] Martin Reisigl and Ruth Wodak, *Discourse and Discrimination: Rhetorics of Racism and Anti-Semitism* (London: Routledge, 2001).
[42] Wodak and Reisigl, *DHA*, 95.
[43] Charis Thompson, "Governance, Regulation, and Control: Public Participation", *Commissioned Papers of the International Gene Editing Summit* (Washington D.C, 2015), 45.

As Table 3 shows, the corpora categorised gene-editing as a technology, technique or a tool. These findings confirm previous research on similar corpora[44] carried out in a cross-linguistic perspective. Interestingly, the metaphor of tool – in the hands of scientists (see section 3.2) – takes on a more important role in tabloids than in broadsheets (144 vs. 80 occurrences), and this prevalence seems to acquire an important reading in terms of responsibility attribution for the correct use of this tool. On logical grounds, the readership of tabloids would get the idea that the tool is left to the discretion of scientists more frequently than the readership of broadsheets.

In terms of discursive construction and explanation of gene-editing – how it works and how it can be used – through verbal collocates, three main semantic fields were identified. These semantic fields are 'change' (including verbs of change, modification, alteration and manipulation, see (1), typically framed as a change of genes that are 'faulty', 'defective', 'disease-causing' or 'flawed', see (4)); 'text-editing' functions (such as 'find and replace' or 'cut and paste', see (2)); and 'mechanical operations' (including actions of cutting and splicing (3), removing and repairing, turning or switching on and off (4)). The latter category includes also other verbs denoting adjustments ('tinker', 'warp', 'tweak', see (5)) and some unwanted or unskilled repairs ('meddle', 'tamper', 'interfere', see (6)). These semantic fields were created analysing and counting verbal collocates of 'gen*' or 'DNA' within the range of ten words to the left (L10) and ten words to the right (R10). Emphasis is added in all examples.

(1) Scientists' favourite method, Crispr/Cas9, makes *precise changes* to individual genes, even *changing* a single "letter" of the genetic code. [Broadsheets]
(2) CRISPR-Cas9 is a *technology* that allows scientists to essentially *cut-and-paste* DNA, raising hope of genetic fixes for disease. [Tabloids]
(3) New scientific techniques, such as *CRISPR-Cas9 - molecular "scissors"* that allow scientists to *snip the genome* at specific points - have transformed genetics in recent years and raised questions about what is practically possible and ethically acceptable. [Broadsheets]
(4) The cut strands of DNA then *repair themselves*, incorporating the new genetic information. If nothing is inserted, the *repair process* can silence, or *'turn off'*, a *faulty gene*. [Broadsheets]
(5) This time, the *gene tinkering* is happening in a precise way inside the body for the first time. [Tabloids]
(6) But it raises questions about the ethics of *tampering with the human genome*, the coded instructions that make us what we are. [Broadsheets]

The technique, along with the functional explanation, is also attributed qualitative characterisations as to its mode of use, with implicit or explicit evaluation following (see Table 4). Table 4 gathers attributes of gene-editing nomination and categorisation nodes, collected through the analysis of concordance lines in the close reading technique.

| Description | BRS | TBL | Attitude |
|---|---|---|---|
| Fast | 30 | 36 | Positive stance towards the speed of progress |
| Cheap | 20 | 10 | Positive stance – accessibility; |

[44] Jekaterina Nikitina, "Representation of Gene-Editing in British and Italian Newspapers: A Cross-Linguistic Corpus-Assisted Discourse Study", *Lingue e Linguaggi*, special issue edited by Paola Catenaccio and Giuliana Garzone, forthcoming.

| | | | |
|---|---|---|---|
| | | | negative stance – lack of control because of its availability |
| Easy | 48 | 68 | Positive stance – accessibility;<br>negative stance – lack of control because of its availability |
| Precise | 55 | 81 | Positive stance – possibility of cures or tailor-made solutions for agriculture;<br>negative stance – risk of human enhancement |
| Available / accessible | 19 | 22 | Positive stance – possibilities for everyone to cure diseases / improve agricultural yield;<br>negative stance – risks connected to the uncontrolled use of the technique |

Table 4: Gene-editing predication and framing in broadsheets (BR) and tabloids (TB)

Gene-editing is most frequently portrayed as a highly precise technique, which allows scientists to make precise changes and corrections (see (1) above). In this way it is typically associated with positive stance towards the technique. At the same time, it is frequently depicted as cheap and easy, which translates into its high accessibility (7), (8).

(7) Previous techniques for messing with the genome were either hit-and-miss or prohibitively expensive. But CRISPR is *very cheap and easy to use*, to the extent that there is literally an app for it: off-the-shelf computer software for deleting or adding instructions to the target DNA. [Broadsheets]
(8) As well as being the latest tech lexicon entry to dispense with its final vowel, Crispr is a technique that allows scientists to edit genes *quickly, cheaply* and *precisely*. [Tabloids]
(9) The technique used by the Chinese scientist is so *cheap and simple*, it could augur a world in which any would-be mad professor can *rewrite* the very blueprint of life, with no respect for the risks. [Tabloids]
(10) For, most worryingly, the science behind CRISPR editing is fast becoming *cheap and accessible*. Professor Charis Thompson, a genetic ethics expert at the London School of Economics, predicts that *amateurs* may even start *playing with the technology in their garages with relative ease*. [Tabloids]
(11) The techniques involved are becoming *easier and cheaper* - potentially bringing them within *reach of despots and jihadi maniacs intent on mass murder*. [Tabloids]

Yet, the potential high availability of the technique inherently involves a lack of control over the persons who will use it (9) and the applications it may lead to (10). The following section addresses the issue of gene-editing stakeholders in the newspapers in more detail, whereas the implications of gene-editing are addressed in Section 3.3.

### 3.2. *The people behind the science*

The mapping of the wordlists shed light on a vast semantic field of science professionals mentioned in news reports. Table 5 groups together the most prominent nodes.

| Main node | Broadsheets | Tabloids |
|---|---|---|
| Scientists | 280 | 459 |

| | | |
|---|---|---|
| Scientist | 75 | 91 |
| Researchers | 81 | 172 |
| Researcher | 15 | 55 |
| Dr | 65 | 386 |
| Doctor | 12 | 3 |
| Professor | 93 | 177 |
| Prof | 27 | 38 |
| Team | 48 | 125 |
| University | 159 | 261 |

Table 5: References to science stakeholders across the corpora

While both corpora referred extensively to science professionals, the data above established a clear pattern of tabloids to mention them more frequently. For instance, the most recurrent node 'scientists' was used almost twice more frequently in the tabloid subcorpus than in the broadsheet subcorpus (280 occurrences in broadsheets vs. 459 in tabloids). Tentatively, it can be construed as a greater desire of tabloids to establish credibility by means of 'name-dropping'.

Another regularity across both subcorpora was a preference for the plural ('scientists', 'researchers') or for collective nouns ('university', 'team') over the singular ('scientist', 'researcher', 'professor'). This choice draws a distinction between the (often unidentified) scientific community and real, identifiable people operating in the field of gene-editing. As examples below illustrate, the plural form is most frequently used in connection with the discoveries and potential of the gene-editing technology.

(12) CRISPR-Cas9 is a technology that *allows scientists to* essentially *cut-and-paste DNA*, raising hope of genetic fixes for disease. [Tabloids]

(13) Harvard *University scientists* are among *a team which used gene editing tool* CRISPR Cas9 to produce 37 piglets free of porcine endogenous retrovirus. [Tabloids]

The singular form, on the contrary, is evoked to substantiate the journalists' claims with direct or indirect quotes by different authoritative sources in the field through the mechanism of 'projection'[45] or 'attribution'.[46] The highly recurrent academic titles 'Dr' and 'Professor' are used before surnames of different scientists, accompanied by affiliations ('from the University of...') or other regalia, to lend credibility to journalistic stories. The most frequent verbal collocates of these nodes belong to the categories of communication verbs (e.g. 'say', 'claim', see (14)) and are comparable with Halliday's

[45] M.A.K. Halliday, *An Introduction to Functional Grammar* (London: Edward Arnold, 1994), 250.

[46] John Sinclair, "Fictional Worlds", in Malcolm Coulthard, ed., *Talking about Text: Studies Presented to David Brazil on his Retirement. Discourse Analysis Monographs No. 13*, (University of Birmingham: English Language Research, 1986), 43-60; Monika Bednarek, *Evaluation in Media Discourse: Analysis of a Newspaper Corpus* (London: Continuum, 2006).

'Sayer',[47] or mental activity verbs[48] ('believe', 'consider', 'warn', see (15)), which can be paralleled to Halliday's 'Senser'.[49]

(14) "Research on human embryos has changed our fundamental understanding of the genetics of cell biology," *says* Alison Murdoch, *professor of reproductive medicine at Newcastle University*. [Broadsheets]

(15) *Professor* Henry Greely, *a genetic ethics expert* at Stanford University in California, *has warned* that there is the very real risk of rogue genetic editing by malicious parties. [Tabloids]

Academic sources are used to explain the technology, or at least to put it against a general scientific background (14). Alternatively, these sources are often used to provide evaluations of the technology or of the parties involved (15), thus shifting the burden of responsibility for any statements to the external sources. Such quotes or attributions,[50] especially those that are backed by socially validated affiliations,[51] may create in the reader an impression that information in the news report is unmediated and, hence, reliable. However, previous research[52] demonstrated that journalists often strip other conventional sources without any additional checks. This strategy is significantly more widespread in tabloids than in broadsheets, marking a difference between the two newspaper types.

Whereas the technology of gene-editing was portrayed showing both the positive and negative possibilities (see 3.1), its operators, when they are not used as sources of information, are frequently characterised in a negative light, pinning down the responsibility for unethical uses of gene-editing on scientists or quasi-scientists. As a consequence, newspapers are interspersed with colourful epithets, denoting gene-editing operators as irresponsible (see (16)), amateur (17) and unscrupulous (18), "playing" with people's lives (19) and engaging in dangerous experiments (20), up to the point of being defined insane (21). Table 6 below reports data of the main semantic fields with negative connotations used to describe scientists, their behaviour or their work.

| Main node | Broadsheets | Tabloids |
|---|---|---|
| Irresponsible / unethical / reckless | 47 | 52 |
| Dangerous / risky /threatening | 34 | 39 |
| Out of control: amateur / rogue / mad | 25 | 39 |

Table 6: Negative strategies for predication and framing of scientists across the corpora

(16) But Dr David King, director of the Human Genetics Alert, which opposes all tampering with the human genome, said: "If *irresponsible scientists* are not stopped, the world may soon be presented with a fait accompli of the first GM baby."[Broadsheets]

[47] Halliday, *Functional Grammar*, 140.
[48] Douglas Biber et al., *Longman Grammar of Spoken and Written English* (Harlow, Essex: Pearson Education Ltd, 1999), 360-363.
[49] Halliday, *Functional Grammar*, 117.
[50] Sinclair, "Fictional Worlds".
[51] Bednarek, *Evaluation in Media Discourse*, 17.
[52] Petersen, "Biofantasies", 1257.

(17) More worrying than bespoke babies, Crispr's low-cost and relative ease of use have raised fears of bioterrorists using it to unleash genetic destruction from *amateur laboratories in their garages*. [Broadsheets]
(18) [I]t places enormous potential power in the hands of *ordinary scientists*. It is also internationally widespread, and beyond the control of any single nation now. So *reckless and unethical experiments* were only to be expected. [Broadsheets]
(19) One British scientist, who described the experiment as 'monstrous', said the researchers involved were *playing 'genetic Russian Roulette'* with healthy babies. [Tabloids]
(20) Another major threat is *rogue scientists* making existing bacterial and viral diseases more *dangerous*. [Tabloids]
(21) But, as DNA editing technology becomes more accessible, fears have grown over *amateur scientists* creating *dangerous* substances or *harming people*. [Tabloids]

Interestingly, the scientists-authors of quotes are not given explicitly positive evaluations; this function is performed mentioning their social status as renowned experts in the field, vouching implicitly for their trustworthiness.

### 3.3. *Implications and applications of gene-editing*

In terms of gene-editing perspectivation,[53] or discursive construction of potential or current results of gene-editing application, both corpora introduced them by verbs of caution (warn, caution, fear, see (22)) as opposed to the idea of hopes for cures (23). Often these ideas were expressed together, meaning that they were not mutually exclusive (24). Another frequent conventional representation concerned the revolutionary (25) and innovative (26) potential of gene-editing, yet it was relatively underused in tabloids in favour of bolder images (see Table 8).

(22) What's more, one of Britain's most renowned scientists recently *warned from beyond the grave* that we should abandon this field of science for ever - or risk destroying humankind. [Tabloids]
(23) These results bring *hope for a targeted gene therapy* and widen the application of the technology. [Broadsheets]
(24) This treatment is a *potential game changer*. In the space of a few years gene editing has given us a possible treatment for all these diseases. We need to be *cautious but also hopeful*. [Broadsheets]
(25) The world is in the midst of a *genetics revolution*. In five years a technology called Crispr Cas9 has turned the fiddly job of editing genetic code into something bordering on routine. [Broadsheets]
(26) "People say it's the *biggest innovation in life sciences in a century*," said Lorenz Mayr, who heads Astra Zeneca's Crispr programme. "I agree. I totally agree." [Broadsheets]

| Main node | Broadsheets | Tabloids |
|---|---|---|
| Caution / fear / warning | 91 | 128 |
| Hopes / cure | 132 | 144 |
| Future with positive prospects | 40 | 54 |

[53] Carl Friedrich Graumann and Werner Kallmeyer, eds., *Perspective and Perspectivation in Discourse* (Amsterdam-Philadelphia: John Benjamins, 2002).

| | | |
|---|---|---|
| Future with negative prospects | 20 | 21 |
| Revolution / innovation | 63 | 38 |

Table 7: Perspectivation of gene-editing applications

Remarkably, the positive perspectivation tended to prevail over the negative perspectivation in broadsheets, while the numbers in tabloids suggested that both prospects of cures and fears were nearly equally overviewed. This could be construed as a subtle invitation to the readership of broadsheets to be open to the positive potential of gene-editing, which has already been introduced in the UK in the research field and is about to be included to the NHS list of services.

The implications of gene-editing were typically projected towards its future use (node 'future'), or future consequences, and in general in two thirds of cases both tabloids and broadsheets framed the use of gene-editing in a more positive light, underlining new opportunities for research, cures for diseases and agricultural improvement.

In addition to general observations about the future use of the technology, both corpora make recourse to a number of popular images and topoi to denote the applications and implications of gene-editing. Table 8 below reports normalised frequencies of the most recurrent imagery – presented in several macro-groups – used to refer to the results or potential results of gene-editing, excluding any uses where the image is not used metaphorically (e.g. 'mutant genes') or not to denote gene-editing (e.g. having a dream). Every concordance line was analysed following CDA principles to assess whether the image was used to construct a positive (P) or a negative (N) representation of gene-editing, analysing images, their framing and argumentation. The results of this analysis are listed under the subheading 'framing' and indicated as per cent out of the total number of occurrences of every image.

| Image | Broadsheets | | Tabloids | |
|---|---|---|---|---|
| | NF | Framing | NF | Framing |
| I. Fantastic creatures | | | | |
| Franken* | 26 | P=17%; N= 83% | 16 | P=42%; N=58% |
| Monst* | 46 | P=0, N=100% | 10 | P=0, N=100% |
| Mutant* | 19 | P=0; N=100% | 1 | P=100%, N=0 |
| Super* | 44 | P=30%; N=70% | 20 | P=35%; N=65% |
| **Total** | **135** | **P=14%; N=86%** | **47** | **P=31%; N=69%** |
| II. Science-fiction and dystopian views | | | | |
| Dystopi* | 3 | P=0, N=100% | 8 | P=66%; N=33% |
| Brave New World | 1 | P=0, N=100% | 10 | P=50%; N=50% |
| Science-fiction / sci-fi | 3 | P=33%; N=66% | 1 | P=100%; N=0 |
| Fantas* | 6 | P=100%, N=0 | 6 | P=71%; N=29% |
| Dream* | 4 | P=100%; N=0 | 5 | P=66%; N=33% |
| Nightmar* | 11 | P=0; N=100% | 4 | P=0; N=100% |
| Curse | 4 | P=75%; N=25% | 2 | P=100%; N=0 |
| **Total** | **32** | **P=43.3%; N=56.6%** | **36** | **P=55%; N=45%** |

| | | | | |
|---|---|---|---|---|
| III. Interventions into human reproduction | | | | |
| Playing God /Creator | 4 | P=0; N=100% | 7 | P=14%; N=86% |
| Designer baby/embryo | 79 | P=35%; N=65% | 46 | P=38%; N=62% |
| **Total** | **83** | **P=33.3%; N=66.6%** | **53** | **P=34%; N=66%** |
| IV. Gene-editing as a weapon | | | | |
| Weapon* | 11 | P=20%; N=80% | 3 | P=100%; N=0 |
| Terroris* | 12 | P=0; N=100% | 6 | P=0; N=100% |
| War / warfare | 12 | P=0; N=100% | 22 | P=15%; N=85% |
| Military | 3 | P=0; N=100% | 3 | P=100%; N=0 |
| Troops | 8 | P=71%; N=29% | 0 | - |
| Soldier* | 6 | P=0; N=100% | 1 | P=0; N=100% |
| Mass destruction | 4 | P=0; N=100% | 5 | P=17%; N=83% |
| **Total** | **57** | **P=12%; N=88%** | **40** | **P=28%; N=72%** |
| V. Impact on the mankind/ "our species" | | | | |
| Humankind future / end | 29 | P=17%; N=83% | 12 | P=42%; N=58% |
| Disast*/ catastroph* | 7 | P=0; N=100% | 4 | P=50%; N=50% |
| **Total** | **36** | **P=14%; N=86%** | **16** | **P=44%; N=56%** |
| **Grand total** | **343** | **P=19%; N=81%** | **191** | **P=41%; N=59%** |

Table 8: Imagery used for discursive construction of gene-editing applications and implications

As Table 8 shows, both corpora use strong images to portray potential gene-editing applications. Yet, tabloids use such images significantly more (343 vs. 191 occurrences), with a clearly predominant negative colouring (81% of all images were negatively framed, see examples (27) and (28) below) as opposed to a more balanced representation in broadsheets (41% of occurrences were used positively and 59% were used negatively), see (29) and (30).

(27) If you think *mutant soldiers* with unstoppable physical and mental powers sound like nothing more than science fiction, you may be in for a shock. A chilling Government report today warns that the *breeding of genetically-modified troops* could be a reality within a generation. [Tabloids]

(28) No less an authority than Professor Stephen Hawking feared such experiments would one day create *a race of 'super-humans', ending mankind as we know it*. [Tabloids]

(29) The debate about human gene editing is less about what may happen tomorrow than about *fundamental fears of dystopian change*. "It is not fanciful to say that... *the end of human beings as a wild breeding race* could be in sight," claimed the Times. [Broadsheets]

(30) By doing so, the argument goes, scientists would ensure the babies born as a result would eventually pass on their tweaked, *disease-resistant genes* to their own children, so *ending the curse of devastating inherited conditions such as Huntington's*. [Broadsheets]

The repertoire of images also demonstrates some divergent tendencies: for instance, tabloids widely exploit the topoi of danger and threat, implying that gene-editing will lead to the creation of super-race, mutants and Frankenstein monsters that will be used as weapons. Broadsheets use the same metaphors at least twice less frequently. Instead, broadsheets rely on the dystopian images (31) and

Huxley's *Brave New World* – underused in tabloids – to exploit the topoi of caution and well-weighed choice about our future.

(31) *Dystopias* may involve the consequences of unfettered choice. *Let's not allow fear of the worst to drive out any hope of the good*. [Broadsheets]
(32) If scientists find a safe way to eliminate genetic disease, Britons will not benefit as the law stands. This *blanket rule* rests on a *bad argument*: that it is wrong to meddle with the DNA of future generations. [Broadsheets]
(33) For now, though, if there's going to be anything even vaguely resembling the *popular designer-baby fantasy*, Greely says it will come from embryo selection, not genetic manipulation. [Broadsheets]

In addition to the usual negative associations related to some of the images, the broadsheets used them to argue in favour of gene-editing dismantling the negative argument (31), (32). In 41% of occurrences of images presented in Table 8, the argument to be overturned is presented and explained – recurring to the popular metaphors, such as 'designer babies', for instance, – and then dismantled disproving its validity (33).

Consequently, a solid demarcation line can be drawn between the two newspaper types by their use of popular imagery: tabloids with sensational images and broadsheets with more balanced representational choices.

## 4. Conclusions

Against the changing social and regulatory background of the UK, where public attitudes play an increasingly prominent role in decision-making processes – as the Brexit referendum has shown, – the level of public awareness of gene-editing is not to be underestimated. This paper started from the premise that newspapers exert an influence on the lay public's understanding of this new and controversial technology. The study examined linguistic and discursive construction of gene-editing, its implications and stakeholders in tabloids and broadsheets between 2017 and 2018. It emerged that all newspapers presented their readership with a clear explanation of this technology, also categorised as a technique or a tool. The basic mechanism of gene-editing was explained in terms of the changes it makes to the genetic make-up of plants, animals or humans through a range of editing functions – based on the Word Processor metaphors – and mechanical operations of cutting and form-modification. The technology was further explained as a simple, fast and cheap operation, relying on the opinion of scientists and shifting the responsibility for its application to the field operators, with the risk of uncontrolled parties foregrounded. The ethical complexity of the technology was problematised in nearly every news report, with strategies ranging from calls for a cautious yet hopeful approach to an open scaremongering. In addition to recurrent negative descriptions of rogue scientists or third parties, the newspapers made an attempt to open a debate around the potential consequences and implications of gene-editing. In this last regard, a stark contrast between tabloids and broadsheets was observed, focusing on the selective representation of claims and the imagery associated with the technology. It emerged that tabloids made recourse to a rich pool of loaded images

with prevalently negative connotation, painting the future world as a gene-edited outrage. In addition, tabloids abounded in quotes and references to credible sources from academia, which could lead to a conclusion that such a perspectivation is the most widespread view on the technology.

The broadsheets also deployed an arsenal of connoted metaphors, yet these were of a less gruesome nature (cf. mutants or monsters vs. the Brave New World). In addition, the broadsheet subcorpus used them argumentatively, often refuting the negative argument in favour of a more balanced opinion, "cautious but hopeful". While it is true that different media might undertake different dissemination paths by tailoring the information to the expectations and tastes of the prospective public, it could potentially lead to a societal divide. Those UK citizens who read tabloids are guided towards a gloomy perspective, and those who read broadsheets are invited to ponder the different perspectives. In a hypothetical scenario of a future public consultation on the use of gene-editing, such a varied perception might prove problematic. Consequently, further dissemination efforts are to be introduced at the governmental level to create a more harmonised knowledge base among the population.

The method of Corpus-Assisted Discourse Analysis allowed me to identify and quantify the tendencies above, yet further work on a downsample would be recommended to provide a more in-depth evaluation of the phenomena involved. In addition, further research with an ethnographic element evaluating how the newspapers affect the public perceptions would be a precious asset. The topicality of gene-editing calls for further research of its linguistic dimension, including other media and channels of knowledge dissemination, as well as ways of its regulation in national and international legal documents which are on their way.

Kim Grego

# Marketing Life after Death.
# Cryopreservation in the Hope of Resuscitation

**Abstract**: A small number of companies offer cryonics services to people intending to preserve their bodies after their death, until a moment in the future when medical progress allows the corpses to return to life by treating the condition that caused their life to end. While cryopreservation has long and successfully been used to store organs and tissues, including for reproductive purposes, cryonics has not succeeded yet in reviving dead humans. This study analysed the language used by cryonics providers a) to disseminate the (pseudo)scientific knowledge and technology behind cryonics and b) to market cryonics services through their websites. It found that cryonics discourse is disseminated as scientific discourse, and marketed like other, non-bioethically relevant services and products, in ways potentially misleading for the lay public. Cryonics is furthermore disseminated and advertised based on a negotiable notion of death that does not correspond to recognised ideas of clinical or legal death. Again, this entails a potential risk where stronger social actors may mislead weaker actors into making uninformed life-or-death choices; for this reason, a critical discourse approach can prove suitable to interpret the discourse of cryonics.

Keywords: *critical discourse*, *cryonics*, *discourse*, *ethical debate*, *marketing*, *web communication*

## 1. Background

This study is part of an ongoing funded investigation on end-of-life discourse, conducted from a discourse-analysis perspective.[1] In particular, what is analysed here is cryonics, or cryopreservation 'in the hope of resuscitation'. A terminological distinction is necessary, to begin with: cryopreservation, i.e. the "process of storing cells, tissue, etc., at very low temperatures (typically around -200°C) in order to maintain their viability",[2] is a technique that has long been used in scientific and medical applications, for instance in assisted reproduction, organ donation and transplantation, and stem cell research. Cryopreservation, in itself, is not the focus of this study; the focus is rather one specific application of cryopreservation, better defined by its ultimate purpose: cryonics, i.e. the "practice or technique of cryogenically preserving a person's body with the aim of reviving it in the future; esp. the cryogenic preservation of a person with an incurable disease until such time as a cure is found".[3] This terminological as well as functional distinction is necessary, because mixing a scientifically viable

[1] It is also part of an Italian nationally funded research project (PRIN 2015) on "Knowledge Dissemination across Media in English", within the Milan's Unit on "Knowledge dissemination and bioethics: preliminary issues".
[2] "Cryopreservation, n.", *Oxford English Dictionary*, online version (Oxford: Oxford U.P., March 2019).
[3] "Cryonics, n.", *Oxford English Dictionary*, online version (Oxford: Oxford U.P., March 2019).

concept (cryopreservation) with one whose validity is still being debated (cryonics) is both a delicate matter and one discursive strategy that, as will be discussed later, is often employed by cryonics providers.

The scientificity (or lack thereof) of cryonics may be derived from a simple review of the research articles investigating it or mentioning it published in the last few decades: a search in the *PubMed* database for the term 'cryonics' only returns 18 papers published between June 1979 and August 2018.[4] On the other hand, a search of English-language newspapers worldwide in the database *LexisNexis* returned 2525 texts published between 21 Nov. 1971 and 4 Apr. 2019,[5] showing that cryonics may not be an interesting subject for scientists yet, but it seems to be such for journalists and lay readers.

Companies currently offering cryonics services worldwide are only a handful; three of them are based in the USA, one in Russia (Table 1). A fifth provider, Oregon Cryonics (US), was founded in 2005 and only recently (2015) began operating in the market; however, since it offers head-only cryopreservation, it has not been considered in this review.[6]

| **Company** | **Country** | **Service(s) offered** | **Price** | **Patients** |
|---|---|---|---|---|
| Alcor Life Extension Foundation (website accessed 31 March 2019) | AZ, US | Head only<br>Whole body | From $ 80,000<br>From $ 200,000 | 167 |
| Cryonics Institute (website accessed 31 March 2019) | MI, US | Whole body | From $ 29,250 (+$ 500-100,000 stand-by costs) | 174 |
| KrioRus (website accessed 16 April 2019) | Moscow, Russia | Head only<br><br><br>Whole body | $ 15,000 (Russians)<br>$ 18,000 (foreigners)<br>$ 36,000 | 65 |
| TransTime[7] (website accessed 16 April 2019) | CA, US | Whole body? | $ 150,000 | 3 |

Table 1: Providers of cryonics services worldwide

## 2. Aims, corpus and methods

[4] *PubMed*, advanced search.
[5] *LexisNexis*, advanced search, English-language newspapers, *www.lexisnexis.com*.
[6] News of a cryonics company set up in India appeared in 2018, followed by news of its closure soon afterwards; the business field is quite recent, so new companies may enter it soon.
[7] Data on TransTime from *www.cryonics.org*.

This study addressed the general research questions of how scientific knowledge about cryonics is disseminated, and for what purpose(s). More specifically, it proposed a discursive analysis of the language used a) to disseminate the (pseudo)scientific knowledge and technology behind cryonics and b) to market cryonics services through the websites of companies offering them. To do so, a corpus was collected comprising texts from selected pages from the four cryonics providers' websites, as specified in Table 2.

| **Alcor** | **Cryonics Institute** | **KrioRus** | **TransTime** |
|---|---|---|---|
| Homepage | Homepage | Homepage | Homepage |
| About Cryonics | Membership | About us<br>History<br>Mission<br>Staff | About |
| What is Cryonics?<br>Cryonics procedures<br>Cryonics Myths<br>Frequently Asked Questions<br>Alcor Book<br>Scientists' FAQ<br>Problems of Cryonics<br>Notable Quotes | Case reports | Services<br>Human cryopreservation<br>Pets cryopreservation<br>Other services | Advisory Board |
| About Alcor<br>Alcor's Mission<br>Alcor's History<br>Why Scottsdale<br>Photo Gallery<br>Video Library<br>Alcor Staff<br>Board of Directors<br>Scientific Advisors<br>Member/Patient Stats<br>Member Profiles | About Cryonics<br>Frequently Asked Questions<br>Common Myths about Cryonics<br>The Case for Cryonics<br>Robert Ettinger Biography | Our patients<br>Cryopreserved people | News |
| Membership<br>General | About CI<br>History/Timeline | About cryonics<br>Timeline of cryonics | Resources |

| | | | |
|---|---|---|---|
| Membership FAQ | Guide to Cryonics<br>Procedures<br>Directors & Officers<br>Patient Details<br>Member Statistics<br>Human Cryostasis | | |
| | The CI Advantage | FAQ | Contact Us |
| | | Contact us | |
| *Tokens 33,496*<br>*Words 28,492* | *Tokens 27,516*<br>*Words 21,919* | *Tokens 11,956*<br>*Words 9,999* | *Tokens 793*<br>*Words 663* |

Table 2: Sections of websites considered for the corpus, accessed 17 April 2019

Only the specific webpages within the sites that were deemed to contain texts with a popularising and disseminating function were selected. Other sections and pages, for instance those dealing with legal and economic aspects, were the subject of another investigation[8] and, as such, were not considered here. Table 2 shows that the largest and most populated websites are those of Alcor and Cryonics Institute, which also feature the most 'patients' or cryopreserved people (Table 1). The Eurasian competitor, KrioRus, has a website about half the size of the first two, although the parts considered here are those in English (the Russian version is expectedly more extensive). TransTime has apparently not updated its website since 2016. The website is made up of five main sections corresponding to single webpages with sparse information (the number of tokens is about 1/30 of the largest two); since 2015, it has had an active page on Facebook, so it may be hypothesised that it has chosen this channel as its favourite means of contact with the public.

With these data, the study intended to discuss the themes and semantic fields emerging or not emerging from the discourse on cryonics as laid out by the cryonics services providers in the selected sections, which mostly have an informative function for the public. In particular, the various themes will be differentiated between general and specialised.

Overall, this was intended as a small, qualitative linguistic study, looking in particular at: a) semantic fields (retrieved through lexical analysis by means of *SketchEngine*)[9] characterising the main themes dealt with when disseminating and promoting cryonics, and b) the lexico-grammatical peculiarities of the discourse of cryonics providers; results were interpreted from a Critical Discourse

[8] Kim Grego, "'Legally Dead, Illegally Frozen?' The Legal Aspects of Cryonics as Discursively Constructed Online by Providers and the Media", in Vijay Bhatia and Girolamo Tessuto, eds., *Social Media in Legal Practice* (provisional title) (London: Routledge, 2019 forthcoming).

[9] Adam Kilgarriff and Pavel Rychlý, *SketchEngine*, (Brighton: Lexical Computing, 2003), *www.sketchengine.eu*.

Studies (CDS) perspective,[10] also briefly touching upon the philosophical notion of death,[11] and the presence and role of metaphors[12] and humour.[13] By dissemination, a discursive view of it is intended here, which takes into consideration the notion of knowledge as "all kinds of contents which make up a consciousness and/or all kinds of meanings used by respective historical persons to interpret and shape the surrounding reality", and of "how it is passed on" to the general public.[14] In particular, the documents will be checked for their degree of 'informativity' as "the quantity of new or expected information in a text",[15] in relation to their 'intentionality' ("the attitude and purpose of text-producers")[16] and 'acceptability', or "the degree to which hearers and readers are prepared to expect and understand a text that is useful or relevant".[17] The relevance of a CDS interpretation for this study, on the other hand, will become clear as the analysis shall reveal a construction of discourse that indeed requires a critical approach, since the subject discussed regards a situation that is, according to Ruth Wodak,[18] "threatening or involve[s] a power play between individuals", a social phenomenon that is "too complex to be dealt with adequately in only one field" (and thus needs an interdisciplinary stance) and in which "values and aims are to be discussed explicitly" and, finally, in which researchers might be "forced to take sides". For this reason, the phenomenon of cryonics services and their marketing may be inscribed within what Norman Fairclough identifies as bringing about a "discursive change affecting the societal order of discourse"[19] or, rather, as creating an altogether new one – cryonics did not exist and was not known to the general public until recently. As will be shown, Fairclough's "three major tendencies: 'democratization', 'commodification', and 'technologization' of discourse"[20] may all be found in the discourse of cryonics.

[10] Ruth Wodak, ed., *Language, Power and Ideology: Studies in Political Discourse* (Amsterdam and Philadelphia: Benjamins, 1989); Norman Fairclough, *Discourse and Social Change* (Cambridge: Polity Press, 1992); Norman Fairclough, *Analysing Discourse: Textual Analysis for Social Research* (London: Routledge, 2003); Ruth Wodak and Michael Meyer, eds., *Methods of Critical Discourse Analysis* (London: Sage, 2001); Ruth Wodak and Michal Krzyzanowski, eds., *Qualitative Discourse Analysis in the Social Sciences* (Basingstoke and New York: Palgrave Macmillan, 2008).

[11] Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (Evanston: Northwestern U.P. 1966); Richard M. Zaner, *A Critical Examination of Ethics in Health Care and Biomedical Research: Voices and Visions* (Heidelberg, New York, Dordrecht and London: Springer, 2015).

[12] George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: Chicago U.P., 1980).

[13] Salvatore Attardo, *Linguistic Theories of Humor* (Berlin and New York: De Gruyter, 1994); Delphine Manceau and Elisabeth Tissier-Desbordes, "Are Sex and Death Taboos in Advertising?", *International Journal of Advertising*, 25.1 (2006), 9-33; Marta Dynel, "Blending the Incongruity-Resolution Model and the Conceptual Integration Theory: The Case of Blends in Pictorial Advertising", *International Review of Pragmatics*, 3.2011 (2011), 59-83; Benjamin Bergen and Kim Binsted, "Embodied Grammar and Humor", in Geert Brône et al., eds., *Cognitive Linguistics and Humor Research* (Berlin and Boston: De Gruyter, 2015), 49-67; Łukasz P. Wojciechowski and Viktória Babjaková, "Necromarketing in the Media and Marketing Communications", *Social Communication*, 1.2 (2015), 15-29; Ceylan Yeginsu, "Funeral Ads Got Britain Talking, but Not About Death", *New York Times*, (2 Aug. 2018), A12.

[14] Siegfried Jäger, "Discourse and Knowledge: Theoretical and Methodological Aspects of a Critical Discourse and Dispositive Analysis", in Ruth Wodak and Michael Meyer, eds., *Methods of Critical Discourse Analysis*, 33.

[15] Ruth Wodak and Michal Krzyzanowski, eds., *Qualitative Discourse Analysis in the Social Sciences*, 9.

[16] Ibid.

[17] Ibid.

[18] Ruth Wodak, ed., *Language, Power and Ideology: Studies in Political Discourse*, xv-xvi.

[19] Norman Fairclough, *Discourse and Social Change*, 200.

[20] Ibid.

## 3. Findings

The themes and semantic fields emerging from a lexical analysis of the texts may be divided (according to their level and domain of specialisation) into:

General
- Life, death, undesirable conditions
- Hopes, beliefs, intentions

Specialised
- Science, technology, scientific dissemination
- The business of cryonics

### 3.1 *Life, death, conditions*

As regards the general themes, those of life, death and the various conditions and diseases mining good health and eventually leading to the passing of a person emerge as both frequent and relevant in the texts considered. Tables 3 and 4 show condensed lexical sketches of 'life' and 'death' as drawn by *SketchEngine*, looking in particular at modifiers, modified nouns, words introduced by 'and/or' and verbs with these words as objects. Absolute frequencies are indicated although, as specified above, the corpus is small and the focus is on the qualitative aspect.

| *life*, n. | **Alcor (65)** | **CI (61)** | **TT (5)** | **KR (27)** |
|---|---|---|---|---|
| Modifiers of "life" | **productive** life<br>1 | **renewed** life<br>2 | **healthy** life<br>1 | **human** life<br>1 |
| Nouns modified by "life" | life **insurance**<br>1 | life **insurance**<br>5 | life **span**<br>1 | life **extension**<br>3 |
| "life" and/or … | life and **death**<br>3 | life and **health**<br>3 | life and **health**<br>1 | life + **health**<br>2 |
| Verbs with "life" as object | **save** lives<br>6 | **restore** life<br>3 | - | **sustain** life<br>1 |

Table 3. Word sketch of *life*.

| *death*, n. | **Alcor (95)** | **CI (46)** | **TT (2)** | **KR (45)** |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Modifiers of "death" | **legal** death<br>23 | **legal** death<br>8 | **clinical** death<br>1 | **biological** death<br>5 |
| Nouns modified by "death" | death **benefit**<br>2 | - | - | death **watch**<br>1 |
| "death" and/or … | death or **injuries**<br>1 | death and **aging**<br>1 | - | - |
| Verbs with "death" as object | **pronounce*** death<br>4 | **consider** death<br>2 | - | **regard*** death<br>1 |

Table 4: Word sketch of 'death'

In the cases of CI and TT, it is interesting how life is more frequently mentioned than death, thus creating a discourse that is pre-eminently concerned with living, and not with techniques for preserving corpses, like cryonics. Even in Alcor's and KR's websites, although the situation is apparently inverted, when checking occurrences manually what emerges is that death is associated with concepts of 'preventing' or 'reversing' it. What is more, most collocations used by Alcor ('legal death': 23 and 'clinical death': 22) and KrioRus ('biological death': 5) are specialised terms from medicine and the law that are nonetheless given a novel acceptation in the texts, i.e. the premodifying adjective is taken to indicate the medical or the legal viewpoint on a person's vital state, which is however not shared by cryonics providers, for whom this may only be a temporary condition. In their discursive narration, legal or clinical or biological death can be just the initial condition for cryopreservation, which may in turn lead to resuscitation. Death only occurs if a corpse is not duly preserved by means of cryonics, and gets decomposed or destroyed, e.g. through interment or cremation.

Table 5 contains selected mentions of phrases regarding death, diseases and other 'undesirable' conditions.

| **Alcor** | **CI** | **KR** | **TT** |
|---|---|---|---|
| Section: "What cryonics is not"<br><br>**interment** method<br>**mortuary** practice<br>**dying** process | Section: "Homepage"<br><br>**disease**, **death** and **aging**<br>legal **death** | Section: "About cryonics"<br><br>biological **death**<br>nanomedicine will make it possible to | Section: "Homepage"<br><br>**illnesses**, such as **cancer** or **heart disease**<br>clinical **death** |

| | | | |
|---|---|---|---|
| legal **death**<br>life and **death**<br><br>Section: "FAQ"<br>Q: What about **aging** and **disease**?<br>A: There is no point in prolonging life if the result will be **illness** and **debilitation**. ... Eventually, **aging** itself will be a **treatable, reversible condition** ..., **biological aging** as we know it today will not exist. | the most **critical moment**<br>the **aging** process **debilitating** and **fatal diseases** | cure all **diseases** including **complications** of **aging** | Section: "About"<br>the **aging process** itself ... might also be cured |

Table 5: Mentions of death, diseases, 'undesirable' conditions

A noticeable occurrence, in all of the four websites, is the reference to ageing as a condition on a par with 'illness', 'cancer' and 'heart disease'. Alcor, in particular, employs the phrase 'biological aging', which echoes the 'biological death' mentioned by KrioRus (Table 4), although the limit set by the premodifier is to be seen differently: aging without the biological limits of the body is considered positive, it amounts to wisdom; death without the adjective is understood – even by cryonicists – as the irreversible condition from which there is no return.

3.2 *Hopes, beliefs, intentions*

The corpus testifies to an extensive use of words, phrases and modal verbs expressing beliefs, hopes and intentions, namely those shared by cryonics supporters about the possibilities of this technology. Table 6 collects a number of such examples.

| **Alcor** | **CI** | **KR** | **TT** |
|---|---|---|---|
| Section: "Homepage"<br>preserve human life **with the intent of** restoring good health **when** technology **becomes available** | Section: "Homepage"<br>we **believe** that day is **inevitably** coming cryonics is presently our **best** | Section: "Homepage"<br>We keep informing people about the **possibilities of** cryonics<br>Section: "History" | Section: "Homepage"<br>**while** the medical treatment for their illness **can be developed**.<br>**with the expectation that** |

| | | | |
|---|---|---|---|
| We **believe** medical technology **will advance**<br>Alcor **seeks to** prevent<br>Section: "About cryonics"<br>The emerging science of nanotechnology **will eventually lead to** devices capable of extensive tissue repair and regeneration<br>This future nanomedicine **could theoretically recover**<br>Section: "FAQ"<br>**in the expectation** they **can be healed and resuscitated in the future** using **advanced future technologies** | **chance with the goal of** revival<br>**in hopes that future** medical technology **may be able to someday** revive<br>the **chance to** live a renewed life in the future.<br>The **potential to** stop or even reverse the aging process<br>The **possibility** of an unlimited lifespan to live all your dreams<br>**seeks to** achieve preservation and transplant of vital organs<br>Cryonic science has the **potential to** preserve or revive<br>Section: "About CI"<br>to eventually revive our patients **when** and if that **becomes** scientifically **possible**. | Revival of cryopatients **in the long range future**<br>**Goals of** the KrioRus project<br>Section: "Services"<br>KrioRus **will help** you<br>Section: "Human cryopreservation"<br>ongoing medical and technological advance, **affords hope in the future to** repair or replace the cells of brain and body.<br>it is always **best to be prepared**<br>We **aspire to** restore our patients to new life, health and vigor.<br>Section: "About cryonics"<br>**when** advanced technologies, in particular, nanotechnology, **will be able to repair** cells* | medical technology **will eventually enable**<br>Section: "About"<br>In the field of medicine in particular, **there is cause for great optimism**.<br>Many scientists now **believe** that ... most or all of today's major illnesses and causes of death **might one day be cured**<br>it even **seems possible** that the aging process itself ... **might** also **be cured**<br>**In time**, human beings **might live** such long, healthy lives<br>the medical technology that **will exist in the future**.<br>Trans Time was founded **to help** people |

Table 6: Beliefs, hopes, intentions

The examples in Table 6 may be categorised into:

- Words/phrases referring to the future
  - advanced **future** technologies (Alcor)
  - **future** medical technology (CI)
  - in the long range **future** (KR)

  - **eventually** / **one day** / **in time** / in the **future** (TT)
- Words/phrases expressing possibility
  - **expectation** (that) (Alcor)
  - **potential** to (CI)
  - **possibilities** of (KR)
  - **enable** / seems **possible** (TT)
- Words/phrases expressing desires/intentions (to help)
  - with the **intent of** restoring good health (Alcor)
  - Alcor **seeks to** (Alcor)
  - with the **goal of** revival (CI)
  - **seeks t**o achieve preservation (CI)
  - We **aspire to** restore (KR)
  - **Goals of** the KrioRus project (KR)
  - KrioRus **will help** you (KR)
  - Trans Time was founded **to help** people (TT)
- Verbs of opinion/hope + future/epistemic form
  - We **believe** medical technology will advance (Alcor)
  - we **believe** that day is inevitably coming (CI)
  - **hope** in the future to repair or replace the cells (KR)
  - Many scientists now **believe** that ... most or all of today's major illnesses and causes of death **might** one day be cured (TT)
- Modal verbs
  - **could** theoretically recover (Alcor)
  - **can** be healed and resuscitated (Alcor)
  - **may** be able to someday revive (CI)
  - **can** be developed (TT)
  - **will** eventually enable (TT)
  - **might** one day be cured (TT)
  - **might** live (TT)
  - **will** exist in the future (TT)
- Prepositional phrases + non-finite embedded/-that clauses
  - with the **intent** of (Alcor)
  - in the **expectation** (that) (Alcor)
  - with the **goal** of (CI)
  - in **hopes** that (CI)
  - with the **expectation** that (TT)
- Adverbial clauses of time
  - **when** technology becomes available (Alcor)
  - **when** and if that becomes scientifically possible (CI)

- **when** advanced technologies, in particular, nanotechnology, will be able to repair cells* (KR)
- **while** the medical treatment for their illness can be developed (TT)

The categories highlighted above clearly overlap at times (some are based on semantics, others on syntax) and are by no means to be considered rigid; they can nonetheless provide general indications as to a widespread use of epistemic modality to express beliefs, hopes and intentions (based on such beliefs and hopes) meant to convince cryonics customers that they can survive. This is differently realised linguistically but common to all the providers, since it appears across all the websites considered, with the exception of modal verbs in the KrioRus website (though allowances should be made for texts that are clearly not written in a native variety of English and that, as such, also include stylistically unusual or ungrammatical use of language, e.g. in the example marked * above).

3.3 *Science, technology, scientific dissemination*

Among the specialised features of the language used by cryonics providers, perhaps the most relevant for purposes of investigation regards the science and technology behind the procedure itself (see Table 7 for a selection of examples).

| **Alcor** | **CI** | **KR** | **TT** |
|---|---|---|---|
| Section: "Homepage"<br>Cryonics is an **experimental procedure**<br>using ***the best available technology***<br>We believe **medical technology** will advance<br>enabling it to heal **damage at the cellular and molecular levels**<br>***Banking of transplantable organs at low temperature*** is a recognized **specialty**<br>Alcor applies breakthroughs in ***organ banking*** | Section: "Homepage"<br>Providing Hope while advancing **Science and Medicine**<br>using ***existing cryogenic technologies***<br>• provides ***suspension at cryogenic temperatures*** also known as cryonics<br>• cryonics outreach and public education<br>• in hopes that future **medical technology** may be able to someday revive and restore them to full health<br>• provides an | Section: "Homepage"<br>We keep informing people about the possibilities of cryonics<br>Improve ***perfusion and storing technologies*** for our patients;<br>Work hard to increase our ***storage safety***;<br>Support and carry on **scientific research** in ***the domain of cryobiology***.<br>Section: "Mission"<br>Popularization of cryonics<br>Ongoing education, explanation and | Section: "Homepage"<br>Trans Time cares for people while the **medical treatment** for their illness can be discovered.<br>Cryonics is ***the science of placing humans*** into a ***low-temperature, biologically unchanging state***, immediately after clinical death, with the expectation that **advances in medical technology** will eventually enable ***full restoration to life and health*** |

| | | | |
|---|---|---|---|
| ***research*** to reduce ***cryopreservation injury*** Alcor encourages and supports **evidence-based research** such as these new ***memory preservation study results***. cryonics is, in fact, simply **an extension of critical care medicine** Section: "Mission" Provide public education as a means of fostering growth to support the goals of 1, 2, 3, 4 above Section: "Cryonics procedures" As a dying patient's condition becomes critical, transport personnel wait nearby on a 24-hour basis. This is called "standby." | ambulance ride to the ***high-tech hospital*** of the future<br>• present **medical science** has given up<br>• Cryonic science has the potential to preserve or revive **endangered or extinct species** Section: "Common myths about cryonics"<br>• The primary difference is a process called vitrification | popularization Section: "Human cryopreservation" after **special procedures** (perfusion and vitrification), the clinically and legally dead patient is immersed into a ***low-temperature medium*** where almost all **chemical reactions** are stopped.<br>• You can arrange for cryopreservation of the brain only. The procedure is called neuropreservation | Section: "About"<br>• In the field of **medicine** in particular, there is cause for great optimism.<br>• Each year that passes marks a new record for **medical research funding**<br>• increasingly precise, **molecular-based technology**.<br>• **the aging process** might also be cured |

Table 7: Science, technology, scientific dissemination

What stands out is the frequency of phrases so commonly found in scientific and technological discourse as collocations:

- Alcor
  - experimental procedure
  - medical technology
  - damage at the cellular and molecular levels
  - critical care medicine
- Cryonics Institute
  - Science and Medicine
  - medical technology
  - medical science

    - endangered or extinct species
- KrioRus
    - scientific research
    - special procedures
    - chemical reactions
- TransTime
    - medical treatment
    - advances in medical technology
    - medical research funding
    - the aging process

In addition to these, other phrases and expressions are also found throughout the websites which, however, do not appear as actual specialised collocations, but are built so as to resemble them:

- Alcor
    - Banking of transplantable organs at low temperature
    - organ banking research
    - cryopreservation injury
    - memory preservation study results
- Cryonics Institute
    - existing cryogenic technologies
    - suspension at cryogenic temperatures
    - high-tech hospital
- KrioRus
    - perfusion and storing technologies
    - storage safety
    - the domain of cryobiology
    - low-temperature medium
- TransTime
    - Cryonics is the science of placing humans into a (continuing)
    - (continued) low-temperature, biologically unchanging state
    - full restoration to life and health

The above expressions thus emerge as new creations and the specialised vocabulary of the novel field of cryonics. They are used alongside established specialised collocations, giving rise to a hybrid lexicon of existing and innovative terms. This linguistic strategy is hardly surprising for an industry that is entirely based not only on viable medical technology but also on the expected developments thereof, and which often includes references to it in the very names or claims of the providing

companies, e.g. Alcor Life Extension Foundation, Cryonics Institute ('Technology for Life'), KrioRus ('The first cryocompany in Eurasia'), TransTime ('People that *care*').

Another discursive feature of cryonics providers is their disseminating aim; at least three of them state it openly (while TransTime, in its very small website, does not mention it clearly):

- Provide public education as a means of fostering growth to support the goals (Alcor)
- cryonics outreach and public education (CI)
- Popularization of cryonics (KR)
- Ongoing education, explanation and popularization (KR).

Proof of this proclaimed popularising effort is indeed found in some linguistic strategies employed by all the providers, such as denomination:

- As a dying patient's condition becomes critical, transport personnel wait nearby on a 24-hour basis. This is called "standby" (Alcor)
- The primary difference is a process called vitrification (CI)
- You can arrange for cryopreservation of the brain only. The procedure is called neuropreservation (KR)

or definition:

- Cryonics is the science of placing humans into a low-temperature, biologically unchanging state (TT)

As a result of this mix of language uses and strategies, the scientific presence behind the discourse of cryonics as constructed by providers emerges, rather, as pseudo-scientific knowledge dissemination, i.e. knowledge that is popularised according to well-known communicative strategies but which is flawed. This is mainly because part of its content (the possibility of resuscitation) is not yet verified in a falsifiable manner, but is based on hopes and intents, as testified by the largely epistemic modality in which it is expressed (see section 3.2).

3.4 *Business aspects*

The four providers analysed offer paid services of various types and with different conditions so, clearly, the other domain of specialisation present in cryonics discourse is that of business (Table 8).

| **Alcor** | **CI** | **KR** | **TT** |
|---|---|---|---|
| Section: "Homepage" | Section: "Homepage" | Section: "Homepage" | Section: "About" |

| | | | |
|---|---|---|---|
| • Preservation **services**<br>• Alcor **Members** / **membership**<br>• technological advances can only lead the mind's imagination to **what is in store for our customers**.<br>• **non-profit organization**<br>• Becoming an Alcor **member** is easy and surprisingly **affordable**, if you are in good health and *eligible for life insurance*, which will **pay** for your cryopreservation<br>Section: "Costs"<br>• **$200,000.00** Whole Body Cryopreservation ($115,000 to the *Patient Care Trust*, $60,000 for cryopreservation, $25,000.00 to the *CMS Fund*)<br>• **$ 80,000.00** Neurocryopreservation ($25,000 to the *Patient Care Trust*, $30,000 for cryopreservation, $25,000.00 to the *CMS Fund*)<br>Section: "Membership"<br>Submit an application<br>Submit an application **fee**<br>Complete your Alcor Membership Documents<br>Obtain **Funding** | **World's largest provider**<br>**leading the way**<br>CI has **performed** more ... than any other cryonics **organization**<br>Exclusive **Membership**<br>Life extension **within reach**<br>**World's most affordable**<br>**$ 28,000** perpetual storage for Whole Body Suspension normally **funded w/** *Life Insurance*<br>Our **mission** is **Members** are **afforded** the opportunity to Reunite with Loved Ones<br>Witness the Future personally experience space travel<br>Live Longer<br>Section: "About CI"<br>The Cryonics Institute is a **non-profit membership organization** | KrioRus is the **first and only cryonics company** in Eurasia at the moment<br>KrioRus **exist since** 2003<br>**more than 200 people** have **signed** with us their **contract** the **list of the patients** can be seen here<br>KrioRus is **open for collaboration** aimed to ensure the best possible **quality** of our **services**<br>Section: "Human cryopreservation"<br>So the fees for cryopreservation of cryopatient's entire body are currently **36000 USD** or equivalent in roubles.<br>Cost of neuropreservation is **18000 USD** for remote cryopreservation (abroad) (or equivalent in roubles or other currency).<br>You have made the right decision [sic] to reach outl [sic] to us<br>Be aware | Trans Time was **founded to help people** bridge the technological gap<br>Section: "Contact Us"<br>Join our next scheduled event at |

Table 8: The business lexis used in cryonics

This is a multi-layered discourse that is expressed both through obviously business-related words and phrases and through more subtle linguistic strategies used, for instance, in marketing. The examples reported in Table 8 are taken especially from the homepages, which act as 'shopping windows' for potential customers – except in the case of TransTime, whose limited amount of text is mostly offered in the "About" section – and from the specific sections mentioning conditions and costs, if present. Overall, the relevant words and phrases examples may be organised according to the following labels:

- Corporate vocabulary
  - Alcor Members / membership (Alcor)
  - non-profit organization (Alcor)
  - services (Alcor)
  - customers (Alcor)
  - Life extension within reach (CI)
  - World's largest provider (CI)
  - performed (CI)
  - organization (CI)
  - mission (CI)
  - Membership (CI)
  - Members (CI)
  - non-profit membership organization (CI)
  - company (KR)
  - exist since (KR)
  - Trans Time was founded (TT)
- Promotional vocabulary
  - what is in store for our customers (Alcor)
  - leading the way (CI)
  - has performed more ... than any other (CI)
  - Members are afforded the opportunity to (CI)
  - first and only cryonics company (KR)
  - more than 200 people have signed with us their contract (KR)
  - the list of the patients can be seen here (KR)
  - KrioRus is open for collaboration (KR)
  - aimed to ensure the best possible quality of our services (KR)
  - founded to help people (TT)
- Economic conditions
  - Alcor Members / membership (Alcor)
  - surprisingly affordable (Alcor)

- eligible for life insurance (Alcor)
- pay for your cryopreservation (Alcor)
- $200,000.00 Whole Body Cryopreservation ($115,000 to the Patient Care Trust, $60,000 for cryopreservation, $25,000.00 to the CMS Fund) (Alcor)
- Submit an application fee (Alcor)
- Obtain funding (Alcor)
- $ 80,000.00 Neurocryopreservation ($25,000 to the Patient Care Trust, $30,000 for cryopreservation, $25,000.00 to the CMS Fund) (Alcor)
- Exclusive Membership (CI)
- World's most affordable (CI)
- $ 28,000 for whole body (CI)
- funded w/ Life Insurance (CI)
- signed with us their contract (KR)
- So the fees for cryopreservation of cryopatient's entire body are currently 36000 USD or equivalent in roubles (KR)
- Cost of neuropreservation is 18000 USD for remote cryopreservation (abroad) (or equivalent in roubles or other currency) (KR)

The picture returned by Table 8 points to the two major, US-based providers having not-for-profit status, while KrioRus seems to be a for-profit company, and TransTime does not provide other information apart from its official status as an incorporated company (TransTime Inc.). The discursive representation of the cryonics business, therefore, does not emerge as inconsistent but as in line with the nature of their organisations which, even if not aiming mainly at generating income (Alcor and CI), still offer services for which fees are payable. The relevant marketing aspects are thus justified, and so is the use of promotional strategies that includes, among other features, evaluative language:

- easy and surprisingly affordable (Alcor)
- World's largest provider (CI)
- Exclusive Membership (CI)
- World's most affordable (CI)
- the best possible quality (KR)

Similarly, advertising strategies are applied throughout the websites, like the use of exhortative imperatives to invite potential customers to act:

- Submit an application (Alcor)
- Submit an application fee (Alcor)
- Complete your Alcor Membership Documents (Alcor)
- Obtain Funding (Alcor)

- Reunite with Loved Ones (CI)
- Witness the Future (CI)
- personally experience space travel (CI)
- Live Longer (CI)
- Be aware (KR)
- Join our next scheduled event at (TT)

The present perfect is employed to inform readers that they have indeed made the right (with a positive evaluation included) decision in contacting the company, thus also creating a narrative of inclusiveness:

- You have made the right decision to reach outl [sic] to us (KR)

A more complex aspect involved in the cryonics business regards the legal implications inherent in taking out a membership (where this is required, i.e. by the two non-profit providers Alcor and CI), and in the contracts regulating the provision of cryonics services in exchange for the specified fees. References to legal aspects do not appear anywhere on TransTime, or on KrioRus's homepage (although here they do in other sections: "Human cryopreservation" and "FAQ. Legal and political aspects", the latter in Russian only). In both Alcor's and CI's websites, however, some law-related terminology may be easily found, namely referring to methods of payment of cryonics fees, with life insurance being a preferred option:

- *eligible* for *life insurance*, which will pay for your cryopreservation (Alcor)
- $115,000 to the *Patient Care Trust*, $60,000 for cryopreservation, $25,000.00 to the *CMS Fund* (Alcor)
- normally funded w/ *Life Insurance* (CI)

The legal aspects regulating membership subscriptions and cryonics provisions are indeed discussed in depth in both Alcor's and CI's websites, with interesting implications especially as regards the notions of 'legal' and 'clinical' death, which have been investigated in a previous study[21] and, for this reason, will be omitted here. Suffice it to report that legal language is widely employed in all the websites considered (except for TransTime's very small one), it is strictly connected with the cryonics business, and possibly represents the most debatable aspect of the entire industry.[22]

## 4. Discussion

[21] Grego, "Legally Dead".
[22] Ibid.

Previous research by the author on this topic has highlighted how cryonics raises bioethical concerns,[23] which may, comprehensibly, beg the question of why there is a bioethical issue at all, since the practice involves corpses, i.e. dead people. The main explanation lies in the obvious fact that, in order to access the practice when one is dead, one has to sign up (and pay) for it when one is alive. What is debatable, therefore, lies firstly in the way the discourse of cryonics is presented, marketed and advertised to the living. This is done, as emerges from the present analysis, similarly to how entertainment and tourist services are sold to the public. The lower section of Cryonics Institute's homepage, for example, is called "Envision a brighter future" and it features eight different reasons why one should choose cryonics. One of these reads:

> Witness the Future
> Don't just imagine the world of the future – personally experience space travel, virtual reality and the other incredible things to come.[24]

As underlined in section 3.4, this short text contains features typical of advertising language, e.g. the use of imperatives for exhortation in both the affirmative ("Witness the Future", "personally experience") and the negative ("Don't just imagine") forms. The contraposition between what should not be done, sandwiched in between what should be done, is an especially captivating strategy, similar to what happens in comparative advertising, with evaluation also expressed by the adjective 'incredible'. Also, the quality of what readers are encouraged to obtain for themselves by choosing cryonics is worth exploring: by witnessing the future, they could access a number of experiences semantically related to it, i.e. 'space travel', 'virtual reality' and 'other incredible things to come'. Yet, the choice of elements for this tricolon is bizarre to say the least, since the first two already exist in the present day, while the third echoes sensational yet vague village fair promises and fairy-tale formulas. A possible interpretation is that the space travel referred to may be – in the imagination of people aged over seventy, who make up a large segment of these websites' commercial target – less like the kind involving Space Shuttles and the International Space Station and more like that in the *Star Trek* saga, while virtual reality may be understood as that in Philip K. Dick's and William Gibson's science fiction, rather than, for instance, as in current haptic technology. On the whole, an appeal like the one above is hardly dissimilar from Disney World's current 2019 campaign inviting visitors to "Travel Around the Globe, Under the Sea, into Outer Space... and Beyond!"[25] In this, Fairclough's notion of 'democratization of discourse', or "the removal of inequalities and asymmetries in the discursive and linguistic rights, obligations and prestige of groups of people",[26] may be seen, in that the (pseudo)argument is constructed so that the audience might perceive that cryonics providers are

[23] Ibid.; See also Kim Grego, "The Pseudo-scientific Discourse of Cryopreservation", in *Proceedings of the XVIII AIA Conference Worlds of Words: Complexity, Creativity, and Conventionality in English Language, Literature and Culture* (forthcoming).
[24] CI, "Homepage".
[25] Disneyworld, "Epcot", 2019, disneyworld.disney.go.com.
[26] Norman Fairclough, *Discourse and Social Change*, 201.

offering them what is within everyone's reach, not just of the wealthy, if only they would take a leap of faith and trust them.

The appeal to pathos, however, is not the only argumentative strategy present in the promotion of cryonics, as the practice is also advertised by applying the same logics as used in lotteries, though not on the same conditions. The reasoning is straightforward, based on the simple questions: 'What if (cryonics works)?' and 'Why not (give it a try)?' It stems from the idea that even the slightest chance of success is a possibility and that not giving oneself such a chance means cutting oneself off from the possible reward it may entail, much like entering a lottery or competition having the usual statistically remotest probabilities. However, on the one condition of entering the game, even the lottery that offers the slightest winning opportunities does guarantee a winner – hence the claims used, for example, by the UK National lottery ('Maybe, just maybe') and the Wyoming Lottery ('Just maybe'). This resembles what Karl Sornig calls 'seduction rather than conviction', with seduction being "an attempt to make people do things as if of their own impulse but really upon instigation from outside".[27] Cryonics providers, thus, invite potential players to enter the game, but do not guarantee any wins, just belief in, hope for and work toward the possibility of having some in an unspecified future. Thus, the reasoning put forward by cryonicists remains a groundless argument since, unlike the premise in lotteries ('among all who enter the lottery, one will win'), in cryonics the premise is flawed ('among all who enter the lottery, some *may* win') and, as such, there is no sound logical argument or, rather, there is what is called an 'argument from ignorance', i.e. one where something cannot be proved true but cannot be proved false either.[28] This type of reasoning, even when starting from a flawed premise, points toward the implication that it is one's own responsibility to join in the competition, i.e. to give oneself the chance of 'maybe' winning, by getting oneself cryopreserved. It is an appeal to values well-rooted in Western cultures such as an individual's freedom of choice, self-determination, and the happiness that supposedly comes from having more than one option at one's disposal, where "[t]he recognition of these rights – which concern the final phase of human life as well as its initial development – is the juridical counterpart of modern individualism, which has its greatest manifestation in the American right of privacy".[29]

Although the mention of it is scarce in the texts examined, and possibly intentionally so, the second issue that emerged as debatable from the analysis seems to be the notion of death itself, and what is understood thereby. That death may be a social construction, seen from different religious, cultural, social and ultimately ideological viewpoints, should not be surprising for anyone. On the contrary, for most laypeople, the fact that the medical understanding of death should be debatable may appear strange, but in specialised settings there is agreement about the existence of disagreeing views. For instance, all the four cryonics websites refer to 'clinical death', which would thus seem to be a shared concept:

[27] Karl Sornig, "Some Remarks on Linguistic Strategies of Persuasion", in Ruth Wodak, ed., *Language, Power, and Ideology: Studies in Political Discourse*, 97.
[28] See Grego, "Legally dead" for a more detailed discussion.
[29] Donella Antelmi, "Manifest Ideology and Hidden Ideology in Legal Language: Definitions and Terms", in Giuliana Garzone and Srikant Sarangi, eds., *Discourse, Ideology and Specialized Communication* (Bern: Peter Lang, 2007), 111.

- What is the impact of **clinical death** on cryonics?[30]
- The patient should be pronounced dead as soon as possible after **clinical death** (which usually means after cessation of heartbeat and breathing).[31]
- Heart and respiratory failures are classified as **clinical death**.[32]
- Cryonics is the science of placing humans into a low-temperature, biologically unchanging state, immediately after **clinical death**.[33]

However, "the phrasing of clinical death is misleading because it may be followed by a confirmatory test for brain death that, for example, shows some cerebral electric activity in the brain", [34] but then again brain death, too, is an elusive notion even by specialists' standards:

> Although brain death is nowadays widely accepted as a criterion for death, **there is no global consensus on the definition and diagnostic criteria of brain death**. In addition, representatives of various disciplines continue to pose serious conceptual and ethical challenges to the concept. Since the determination of brain death is mainly relevant in relation to organ transplantation, controversies about the brain death criterion have significant ethical implications for the policy and practice of organ donation.[35]

Although Western medical science agrees that death coincides with brain death, however it may be defined, the discourse of cryonics brings the debate one step further, by questioning even the very concept of brain death as a final state, and by introducing yet another understanding of death, i.e. 'information-theoretic death', or the irrecoverable loss of the information stored in the brain:

- Ultimately, real death occurs when cell structure and chemistry become so disorganized that no technology could restore the original state. This is called the **information-theoretic** criterion for **death**. Any other definition of death is arbitrary and subject to continual revision as technology changes.[36]
- It is important to understand that we consider legal death distinct from absolute final death, which can be best defined by the principle of **information theoretic death**.[37]
- Modern science cannot define the exact moment of what is called: **information theoretic death**, as this depends not only on the current knowledge of the human brain mechanisms, but upon the ability of future medical technologies to recover and restore information encoded even in a damaged brain, toward patients revival and recovery of the personality at all intact.[38]

[30] Alcor, "FAQ".
[31] CI, "Guide to Cryonics Procedures".
[32] KR, "About cryonics".
[33] TT, "Homepage".
[34] Erik J. Ettema, "Brain Death", in Henk Ten Have, ed., *Encyclopedia of Global Bioethics* (Dordrecht: Springer, 2016), 400.
[35] Ibid., 399, emphasis added.
[36] Alcor, "About Cryonics".
[37] CI, "Human cryostasis".
[38] KR, "About cryonics".

Thus, the specialised phrases 'clinical death' and 'brain death' do occur in the texts analysed, but only to be refuted as an imprecision on the part of current medical practitioners, who ignore the possibility offered by cryonics to avoid information theoretic death by cryopreserving clinically- and brain-dead people. The one specialised notion they accept is that of 'legal death', and mostly for liability reasons (not breaking existing laws).[39] Information-theoretic death, thus, further enriches the multi-layered notion of death with yet another discursive layer, and death moves from debatable (in scientific academic terms) to negotiable (in pseudo-scientific popular terms): "[i]n other words, death – and, hence, brain death – is a social construct rather than a medical fact".[40] And in this we could recognise Fairclough's conception of 'technologization of discourse' (and examples of discourse technologization include advertising), whereby "[m]odern societies are characterized by a tendency towards increasing control over more and more parts of people's lives"[41] and, we could add here, even death.

And, even philosophically, at least according to Hans Jonas and his perspective on the past century's growing relationship between life and technology, "[a]ll modern theories of life are to be understood against this backdrop of an ontology of death, from which each single life must coax or bully its lease, only to be swallowed up by it in the end",[42] since "[o]ur thinking today is under the ontological dominance of death".[43] Present-day bioethics also adds that, in this renewed relationship between life and death, reshaped by technology, "no science of life (bio-logy), much less a medical science focused on human life, can be well-grounded or epistemologically complete if it ignores this signal characteristic of the human body, embodiment".[44] Cryonics rides both of this era's trends – the ontological dominance of death, and embodiment as epistemologically defining life sciences –, functionally adapting them to its discourse of resuscitation: by hypothesising information-theoretic death, the legally dead body is kept embodied, overturning the dualism of life and death in favour of life.

Continuing on the notion of embodiment, another observation regards the use made by cryonicists of language above the literal level. Several metaphors are found in the websites analysed; one seems especially fascinating: "Cryonics Institute provides an ambulance ride to the high-tech hospital of the future".[45] The domain- and culture-specificity of the human experiences on which it draws can clearly be seen in the light of Lakoff and Johnson's conceptual metaphor theory, based on embodied cognition,[46] actually bending it instrumentally to the cryonicist's discursive construction to reinforce the supposed link between the (dead) human body and its cognitive abilities as supposedly cryopreserved in the brain.

[39] See Grego, "Legally Dead, Illegally Frozen?".
[40] Erik J. Ettema, "Brain Death", 405.
[41] Norman Fairclough, *Discourse and Social Change*, 215.
[42] Hans Jonas, *The Phenomenon of Life: Toward a Philosophical Biology*, 15.
[43] Ibid., 12.
[44] Richard M. Zaner, *A Critical Examination of Ethics in Health Care and Biomedical Research*, 52.
[45] CI, "Homepage".
[46] Lakoff and Johnson, *Metaphors We Live By*.

A final note should regard humour or, rather, the total absence thereof in the corpus. The expectation was that some forms of humorous language might be present, for at least two reasons. Firstly, because the use of embodied metaphors has emerged from the texts, and "there is a natural fit between the phenomena associated with linguistic humor and the theoretical apparatus of embodied linguistics; in particular, ... humor makes use of constructional pragmatics and mental imagery, as well as metaphor and frames".[47] Secondly, because in Western cultures making fun of death is not unheard of, even in advertising,[48] one example being (sometimes very successful) funeral homes ads.[49] The cryonics providers' corpus, however, does not seem to feature humour anywhere: no jokes, no puns, no witticisms about their services. This is probably due to the kind of audience that providers address, who often include terminally ill patients, older people in their last years or individuals generally preoccupied with and distressed by the idea of death as the end of everything. The cryonics audience are people who have not accepted the eventuality or the finality of death; therefore, they still hope. And, while in Western cultures it is acceptable to make fun of death just as it is to make fun of life, it is much less acceptable, if not an outright taboo, to make fun of people's 'hopes', fundamentally because humour must be shared by both those initiating and those receiving it. Theories of humour stemming from sociological studies distinguish between 'including' and 'excluding' laughter, or bonding and distancing humour, with the latter possibly causing annoyance or even open aggression in response.[50]

In this case, the humour would not be shared by the recipients and it would thus configure itself not just as aggression but as outright cruelty toward them. In this specific case, neither the cryonics providers nor their potential clients share a belief in death. Clients do not believe in it because they just do not wish to die; providers do not for the same reason (if they are genuine in their declared mission), or because they want their potential clients not to believe in death (if their business purpose prevails).

## 5. Conclusions

This study has tried to discursively analyse the language used to disseminate the (pseudo)scientific knowledge and technology behind cryonics and to market cryonics services on the web. In general, the discourse of cryonics as presented by its providers emerges as highly complex (though maybe not at first sight), hybridised and revolving around a wide range of themes. These features were highlighted by a lexical analysis of the texts, according to which the identified semantic fields may be divided into general – for instance 'Life, death, undesirable conditions' and 'Hopes, beliefs, intentions' – and specialised domains, among which those concerning 'Science, technology, scientific dissemination' and 'The business behind cryonics' were examined in particular. This "embedding of one style within

[47] Bergen and Binsted, "Embodied Grammar and Humor", 64.
[48] See, e.g., Manceau and Tissier-Desbordes, "Are Sex and Death Taboos in Advertising?"; Dynel, "Blending the Incongruity-Resolution Model and the Conceptual Integration Theory"; Wojciechowski and Babjaková, "Necromarketing in the Media and Marketing Communications".
[49] Yeginsu, "Funeral Ads Got Britain Talking, but Not About Death".
[50] Attardo, *Linguistic Theories of Humor*, 324-325.

another"[51] contributes to the heterogeneous and hybrid complexity of the discourse of cryonics providers. These "combine discursive conventions, modes and elements in new ways in innovatory discursive events",[52] and make it appear as if it were an innovative order of discourse. In Wodak's terms,[53] then, concerning intentionality, the text-authors convey a double purpose: an informative and a persuasive one. Concerning acceptability, though, the recipients tend to receive mostly the latter, since what they share with the authors is the hope or belief in the possibility of reviving. The communicative and power relationship is thus unbalanced, and so is the informativity requirement, which cannot be actually met by cryonics providers simply because there is not enough information on the effects and developments of cryopreservation.

Thus, providers construct their mission as an attempt to go beyond "the point at which – under the current state of medical science – the doctor gives up",[54] but they do so with a commercial purpose. In this regard, it would not be inaccurate to mention Fairclough's reference to 'commodification',[55] whereby not only objects but services and, in this case, even (dead) people are made into commodities, which cryonics providers, instead of clients or consumers, call 'members' when living and 'patients' when dead. Yet, because complexity is an underlying feature of all bioethically-sensitive issues concerned with life, cryonics discourse is linguistically constructed not as a discourse of death but as a discourse of (hope for) life, and this makes it pertinent to research on end-of-life and bioethically-relevant issues.

To answer the research questions in particular, cryonics discourse is disseminated as if it were scientific discourse, and marketed like other non-bioethically relevant services and products (e.g. tourism, entertainment), including ethically debatable ones (e.g. betting, lotteries, high-risk investments). Fairclough's reference to 'new capitalism' as a practice in which 'desires are represented as facts'[56] can thus apply to cryonics marketing. This is why it emerges as potentially misleading for the public, and this is where the underlying ethical issues lie: see for example the British Columbia anti-cryonics law of 2004[57] – the only existing piece of legislation directly addressing cryonics worldwide at the time of writing and aimed at 'protecting' citizens – which does not prohibit the practice in itself but the 'advertising' thereof.[58]

What is more, cryonics, although about (supposedly restoring) life, is disseminated and advertised based on a presupposed notion of death that is ideologically framed, socially constructed and constantly renegotiated.[59] While this may indeed be posed as an innovative order of discourse, at the

[51] Fairclough, *Discourse and Social Change*, 22.
[52] Fairclough, *Discourse and Social Change*, 97.
[53] Ruth Wodak and Michal Krzyzanowski, eds., *Qualitative Discourse Analysis in the Social Sciences*, 9.
[54] CI, "FAQ".
[55] Fairclough, *Discourse and Social Change*, 207.
[56] Norman Fairclough, *Analysing Discourse: Textual Analysis for Social Research*, 204.
[57] "Cremation, Interment and Funeral Services Act", Statute of British Columbia of 13 May 2004, Chapter 35, Part 3, Article 14.
[58] See Grego, "Legally Dead, Illegally Frozen?", in Girolamo Tessuto and Vijay K. Bhatia, eds., *Social Media in Legal Practice* (London: Routledge, forthcoming).
[59] Wodak, *Language, Power and Ideology*; Fairclough, *Discourse and Social Change*; Fairclough, *Analysing Discourse*; Wodak and Michael Meyer, *Methods of Critical Discourse Analysis*; Wodak and Krzyzanowski, *Qualitative Discourse Analysis in the Social Sciences*.

same time it employs communicative strategies typical of conspiracy theories (i.e. "'official' medicine is keeping a possibility from you, but we can offer it to you for a price"). To do so, this innovative notion of death – 'information-theoretic death' – could be pushed by cryonicists to new limits, even hypothesising the procurement of death before it occurs naturally in order to speed up and ease the cryosuspension process.[60] Again, this entails a potential risk of misleading weaker individuals (e.g. the terminally ill) into making decisions without exploring their every single implication, i.e. without their fully informed consent. Consequently, the matter raises an ethical problem and, where opportunities for stronger actors to mislead weaker actors arise, it means unbalanced power relations are at work. A critical discourse approach is therefore suitable to address it.

It is hoped that this study has contributed to showing how the toolkit of Critical Discourse Studies, applied to 'mere' lexical and textual observations, may still be useful today in uncovering social unbalances and unequal relations of power placing weaker social groups (e.g. the elderly, the terminally ill, etc.) at risk, even and especially within new forms of capitalist approaches, such as selling virtual tickets to life-after-death. Both the limits and the possible future developments of this sort of research mainly lie in the changing landscape of cryonics as a (pseudo)scientific practice, as an industry and a discourse, which is developing as we write. The close link between (medical) science and society is, on the one hand, necessary, democratic and desirable; on the other, it may prove risky, especially when society tries to make science negotiable, for instance through social media. Further monitoring and investigation of the discourse of the fascinating yet debatable practice of cryonics is thus deemed both necessary and advisable.

[60] See Francesca Minerva and Anders Sandberg, "Euthanasia and Cryothanasia", *Bioethics*, 31.2017 (2017), 526-533, on cryo-euthanasia.

Maria Cristina Paganoni

# Ethical Concerns over Facial Recognition Technology

**Abstract**: The article intends to discuss the impact of facial recognition (FR) technology by critically assessing the divergent viewpoints, expressed by the corporate world and by civil society in the news media, through the discourse analysis of representative textual samples. FR software is one of the most recent developments in the use of biometric data for identification. Its applications, which range from unlocking your smartphone, renting a car and taking an online exam to police monitoring of image databases, are strongly debated on opposite sides. Tech companies extol the level of security of biometric authentication when compared to simple usernames and passwords, claiming the quintessential authenticity of the human face. Voices of civil society and advocacy groups, instead, stress the risk of extended video surveillance and the legal vacuum that surrounds the technology. A main claim is that biometric face recognition is not exempt from bias, error rates and false positives. Besides, though still in a pilot stage, FR development towards the reading of emotions increases anxiety over its power to detect the signals that are wittingly or unwillingly sent in human face-to-face interaction. In the light of this socio-technical controversy, the article aims to reflect on today's man-machine interactional configurations and their ethical impact, as the debate increasingly permeates public discourse.

Keywords: *artificial intelligence*, *ethics*, *man-machine interaction*, *privacy*, *surveillance*

## 1. Introduction

This article sets out to highlight a few aspects of the ethics debate concerning the use of facial recognition (FR) technology from a discursive perspective,[1] starting from the controversy it has generated since entering the mainstream in the last few years. The topic is a further development in the emerging contribution of discourse studies to the cross-disciplinary big data debate that is affecting all fields of knowledge.[2] It is motivated by a wider interest in the ways in which technology discourses probe into social complexities,[3] especially when contentious issues polarise public opinion, in this case pre-eminently, with conflicting concerns about security and privacy.

In a nutshell, facial recognition emerges from several decades of civilian and military research. Based on software and algorithms, it is capable of analysing digital images and recognising faces in them by crosschecking facial features with a database. After being used for security and surveillance,

[1] John Flowerdew and John E. Richardson, eds., *The Routledge Handbook of Critical Discourse Studies* (Abingdon and New York: Routledge, 2018).
[2] For a recapitulation of the debate in the humanities and social sciences and the insights that a linguistically informed analysis can provide, see Maria Cristina Paganoni, *Framing Big Data: A Linguistic and Discursive Approach* (Cham: Palgrave Macmillan/Springer Nature, 2019).
[3] Ian Roderick, *Critical Discourse Studies and Technology: A Multimodal Approach to Analyzing Technoculture* (London: Bloomsbury, 2016).

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it has been commercialised as "a mature technology ... achieving a better performance than human"[4] and is now ubiquitous. As vast amounts of data are required to build pattern recognition, FR has been boosted by the use of big data and machine learning.

Several firms now supply this technology and platforms make it available to the public and private sector. Amazon has developed and sells its own software (Rekognition),[5] while Facebook uses DeepFace as a face detector tool.[6] Biometric facial recognition authentication is now a regular household technology with the iPhone X, which deserves its merit of having made consumers comfortable with it. While offering personalised experience for consumers, the uses of FR exceed the mere business and marketing perspective to serve important social needs. In the words of its proponents, FR helps to trace missing children, identifies threats and prevents frauds, crimes, shoplifting and harassment, leading to the arrest of murderers, drug and human traffickers, sexual offenders and terrorists.[7] Proponents also refer to the added feeling of security that the technology may bring. Besides, FR has potential benefits for the visually impaired. In sum, the breadth of FR applications in a number of societal fields reveals the depth of its engagement in the lives of ordinary people.

At the same time, such a widespread technology is at the centre of much controversy. While developers extol its virtues, voices of civil society and advocacy groups express concerns about its social, political and ethical implications. Because of its reliance on sensitive biometric information, FR raises a number of ethical issues and concerns about privacy, human rights and civil liberties[8] that do not go unnoticed by its opponents. Among these concerns, which are now central to the developing field of machine ethics at the intersection of computer science, law and ethics,[9] there are forms of social control including political and religious beliefs, cross-border mobility, gender, ethnic profiling, and non-cooperative, non-consensual photos.[10]

In light of the above, what will be addressed in the following article will position FR technology within the current discussion on the benefits and threats of big data and machine learning, where it belongs. More specifically, the focus of the argumentation will be placed on the dynamics of the emerging ethics debate, in particular as concerns the balance between personal and public security

[4] Issa Traore, Mohammed Alshahrani and Mohammad S. Obaidat, "State of the Art and Perspectives on Traditional and Emerging Biometrics: A Survey", *Security and Privacy*, 1.6 (2018), 7.

[5] Allison Matyus, "Amazon's Facial Recognition Updates Can Detect Fear, among Other Emotions", *Digital Trends* (14 August 2019), *www.digitaltrends.com*: "Amazon announced on Monday improvements to the service that includes better accuracy for gender identification and emotion detection. Amazon said, 'we have improved accuracy for emotion detection (for all seven emotions: Happy, sad, angry, surprised, disgusted, calm, and confused) and added a new emotion: Fear'".

[6] After facing a class-action lawsuit over the violation of user privacy with its facial recognition tools, Facebook has very recently made DeepFace an opt-in feature that requires explicit user consent to be activated.

[7] In 2011, FR technology helped to confirm the identity of Osama bin Laden when he was killed in a US raid.

[8] On 14 May 2019, for example, San Francisco became the first American city to ban its police and law enforcement agencies from using facial-recognition systems.

[9] Brent Mittelstadt et al., "The Ethics of Algorithms: Mapping the Debate", *Big Data & Society*, 3.2 (December 2016), 2: "machine ethics ... investigates how best to design moral reasoning and behaviours into autonomous algorithms as artificial moral and ethical agents".

[10] Kelly A. Gates, *Our Biometric Future: Facial Recognition Technology and the Culture of Surveillance* (New York: New York U.P., 2011); Jake Laperruque, "Preserving the Right to Obscurity in the Age of Facial Recognition", in *The Century Foundation's Report on Surveillance and Privacy* (20 October 2017), tcf.org/about.

versus human rights and civil liberties.[11]

## 2. Methodology and Data Set

Moving from the assumption that our experiences of technology are framed by the ways we discuss and represent it, the issue under analysis is investigated by means of a qualitative toolkit that combines Discourse and Critical Discourse Analysis. Both provide a linguistically informed approach to an understanding of the relationship between language, representations of technology and their ideologies. The approach is interdisciplinary, enriched with insights from the social sciences, in particular in the emerging field of the ethics of artificial intelligence (AI).[12]

For the purpose of this analysis, which is qualitative in nature, textual material was drawn from two main specialised domains, corporate and news discourse, which are emblematic of the ideological polarisation that is currently generated between the technological viewpoint that praises FR, and political, social and civic concerns that express unease about its unregulated use. While AI companies advertise FR, thus somewhat underestimating the risk of ethical breaches, the news media, which amplify the spectrum of societal views, are more prone to depicting its shadows together with its lights.

Corporate sources were selected by searching the phrase 'top facial recognition companies in 2019' on the Google search engine and then cross-checking the names thus retrieved in the *Financial Times, Forbes*, *Fortune* and *Wired* because of their focus on leading trends in business and tech innovation. At that point, five companies and their respective software were selected, three located in the Asia-Pacific region, SenseTime (SensePass Pro) and Megvii (Face++), in China,[13] and NEC Corporation in Japan, to which Facewatch in the UK and FaceFirst in the US were added. Textual material was drawn from each company's corporate website and from promotional videos, when available. Microsoft, Google (FaceNet), Apple (FaceID), IBM (i2 FR software), Facebook (DeepFace) and Amazon (Rekognition) were also taken into account, since they have all developed their own facial recognition system, tapping into large data sets of images.

The news corpus was manually collected from the web, with "facial recognition" as the search query. It consists of thirty-eight articles, retrieved from the UK and US mainstream press and of eighteen from tech, science and business magazines in English, in the time period spanning from March 2018 to February 2020. The transcripts of two videos on FR uploaded to YouTube by the *Economist*, "Facial Recognition Technology Will Change the Way We Live" on 1 November 2017, and "China: Facial Recognition and State Control" on 24 October 2018 were also added, because of

[11] See Jonathan Shaw, "Exposed: The Erosion of Privacy in the Internet Era", *Harvard Magazine*, Sept-Oct. (2009), 38-43, and also, Lucas Introna and Helen Nissenbaum, "Facial Recognition Technology: A Survey of Policy and Implementation Issues", Organisation, Work and Technology Working Paper Series (Lancaster University: The Department of Organisation, Work and Technology, 2010).

[12] See Michael Anderson and Susan Leigh Anderson, "Machine Ethics: Creating an Ethical Intelligent Agent", *AI Magazine*, 28.4 (2014), 15-26.

[13] The two Beijing-based companies trained their FR technology on MSCeleb, Microsoft's data set of roughly ten million faces that has now been deleted from the Internet. In October 2019, both SenseTime and Megvii were put on a blacklist of the US Department of Commerce for human rights violations against Xinjiang's Muslim minorities.

their focus on the technological and the socio-political viewpoint respectively, for a total of fifty-eight items.

Aid to investigate this heterogeneous data set was provided by the use of the ATLAS.ti Cloud, the web-based version of the ATLAS.ti 8 software package for computer-assisted qualitative data analysis.[14] Its interface and data visualisation facilitate the exploration of (multimodal) textual materials beyond counting occurrences. The way in which the function of coding is implemented allows the researcher great flexibility in highlighting portions of data, creating quotations and associating them with interpretive concepts, i.e. positive and negative connotations of facial recognition. In this case in particular, two functions were found to be useful, first the generation of word clouds in order to identify and code key lexical items and, second, the ability to retrieve these items, which are embedded in wider stretches of text, to highlight the features of discourse semantics to which the CDA approach was applied.

## 3. The Discursive Negotiation of Security and Privacy

As a result of its widespread adoption – from marketing to law enforcement – which was made possible by advancements in machine learning, the 'virtue signalling' of FR technology has amplified of late in corporate storytelling. This is to say that the dominant discourse in the global AI industry is orchestrated and strategically deployed to praise (and sell) FR accuracy and security in order to garner approval from stakeholders. As can be seen in examples (a), (b) and (c), the perfective use of the present tense in declarative sentences represents events as complete and bounded, implying that FR companies' position is legitimate rather than problematic, at least potentially.

(a) FaceFirst creates safer communities, more secure transactions and great customer experiences. Powered by the FaceFirst computer vision platform, the company uses face recognition and automated video analytics to help retailers, event venues, transportation centers and other organizations prevent crime and improve customer engagement while growing revenue. FaceFirst is highly accurate, fast, scalable, secure and private.[15]

(b) Simple, secure and affordable, we are the premier choice of retail security companies in the UK. Facewatch is proven to stop crime before it happens.[16]

(c) NEC's original biometric authentication technologies in six areas –face recognition, iris recognition, fingerprint/palmprint recognition, voice recognition and ear acoustic authentication – are the best of their class in the world. NEC provides the most suitable solutions to customers' needs with its biometric authentication technologies. In addition, by combining multiple biometric authentication systems, NEC's solutions bring about even more robust security.[17]

[14] For its use in computer-assisted qualitative data analysis (CAQDAS), see Susanne Friese, *Qualitative Data Analysis with ATLAS.ti,* Third Edition (London: Sage, 2019).
[15] FaceFirst, "A Complete Facial Recognition Platform", *www.facefirst.com*.
[16] Facewatch, "The UK's Leading Facial Recognition Security System", *www.facewatch.co.uk*.
[17] NEC, "NEC's Biometric Authentication Technologies", *www.nec.com*.

Far from being isolated, the above quotations, retrieved from the websites of leading AI companies worldwide, can be described as emblematic of a largely uncritical stance, whereby accompanying declarations of high-level ethical principles and self-regulatory codes attempt to build customer trust through persuasive discourse. However, the extent to which these statements are based on verifiable protocols and a more detailed picture of the functioning of this technology in real-world environments is not communicated to stakeholders.

(d) We work to ensure that new technologies incorporate considerations of user privacy and where possible enhances it.... Sensitive data stays on the device, while the software still adapts and gets more useful for everyone with use.[18]

(e) SenseTime aims to develop AI technologies that advance the world's economies, society and humanity for a better tomorrow.... We have made a number of technological breakthroughs, one of which is the first ever computer system in the world to achieve higher detection accuracy than the human eye.... Today, our technologies are trusted by over 700 customers and partners around the world to help address real world challenges.[19]

According to more skeptical views in digital ethics, it would seem that "the current conversation about algorithms absolves firms".[20] Rhetorical adroitness oversimplifies the issue of trust, deflecting responsibility for what the AI industry designs, produces and commercialises, while corporate self-regulation leads to a fragmented landscape of ethical decisions, for example about how to protect biometric data when stolen.[21] In sum, a major limitation of AI companies' ethical approach lies in the fact that it fails to effectively address normative and political disagreement, from privacy law to human rights,[22] under the pressure of overriding business interests and the fast-changing scenario of AI implementation.

### 3.1 *A powerful technology and a booming industry in a data-driven world*

Among the keywords that were singled out to describe the winning features of FR in corporate discourse and in the news media we find lexical items and phrases that verge on the hyperbolic and stress the fast rise and 'broader use' of this 'powerful technology' and 'booming industry' with a 'huge impact'. As expected, the type of narrative these words contribute to constructing is that of

[18] Google AI, "Our Approach to Facial Recognition", https://ai.google/responsibilities.
[19] SenseTime, "About Us", *www.sensetime.com*.
[20] Kirsten Martin, "Ethical Implications and Accountability of Algorithms", *Journal of Business Ethics,* 160.4 (December 2019), 835-850.
[21] Luciano Floridi, "Translating Principles into Practices of Digital Ethics: Five Risks of Being Unethical", *Philosophy & Technology*, 32.2 (June 2019), 185-193. In his article Floridi, who is Professor of Philosophy and Ethics of Information and Director of the Digital Ethics Lab of the Oxford Internet Institute, discusses five unethical risks in translating principles into practice: ethics shopping, ethics bluewashing, ethics lobbying, ethics dumping and ethics shirking (186). He argues that "shortcuts, postponements, or quick fixes do not lead to better ethical solutions but to more serious problems, which become increasingly difficult to solve the later one deals with them" (192).
[22] Brent Mittelstadt, "Principles Alone Cannot Guarantee Ethical AI", *Nature Machine Intelligence*, 1 (November 2019), 501-507.

technological determinism, and is discursively reinforced by ergative verbs, like 'expand', 'grow', 'increase', 'quadruple', 'spread', and 'widen', used in intransitive constructions.[23] In (f) and (g), for example, the ascent of this biometric application is portrayed as a self-generating process that is endowed with autonomous life and strength and somehow inevitable and unstoppable once it has been hatched.

(f) From law enforcement to banking and from retail to healthcare, the market for facial recognition technology is expected to quadruple in size…. The appetite for facial recognition is growing fast for sound commercial reasons across a whole host of sectors in the UK, particularly retail and travel.[24]

(g) Facial recognition technology has spread prodigiously.[25]

In fact, it is not difficult to recognise a discursive variation and an expansion of the "Data Is Power" statement in the conventionality of this narrative. The refrain has been defining the big data ecosystem and economy since the last decade of the twentieth century.[26] What should be read between the lines, nonetheless, is that rapid advancements in artificial intelligence and machine learning are bringing about unpredictable and underestimated outcomes (example h), that go much beyond tagging faces in uploaded images on social media platforms and the convenience of unlocking smartphones.[27]

(h) As face-recognition technology spreads, so do ideas for subverting it.... Powered by advances in artificial intelligence (AI), face-recognition systems are spreading like knotweed.[28]

In other words, what the news media capture and amplify is a not unusual phenomenon. Technological innovation outpaces the ability of laws and regulations to keep up and the legal vacuum that follows pushes the ethics debate into the limelight. It means that, while data scientists address algorithms mostly as mathematical constructs in the seclusion of computer labs, the need for an ethical approach arises empirically in the public arena, at the discursive conflation "between formal definitions and popular usage of 'algorithm'".[29]

Because of its ubiquity and invasiveness, which derive from the power of digital technologies to create new and unplanned contexts and environments,[30] FR is now blamed for being instrumental to

[23] Michael A.K. Halliday, *An Introduction to Functional Grammar,* Fourth Edition, revised by Christian M.I.M. Matthiessen (Abingdon and New York: Routledge, 2014).
[24] Natasha Bernal, "Facial Recognition: Future of Business or Ethical Nightmare?", *The Telegraph* (28 November 2018), *www.telegraph.co.uk*.
[25] Ian Sample, "What Is Facial Recognition – and How Sinister Is It?", *The Guardian* (29 July 2019), *www.theguardian.com*.
[26] Paganoni, *Framing Big Data*, 5.
[27] Niloufer Selvadurai, "Not Just a Face in the Crowd: Addressing the Intrusive Potential of the Online Application of Face Recognition Technologies", *International Journal of Law and Information Technology*, 23.3 (Autumn 2015), 187-218.
[28] *The Economist,* "Fooling Big Brother" (15 August 2019), *www.economist.com*.
[29] Mittelstadt et al., "The Ethics of Algorithms", 2.
[30] "The ethical impact of the digital transcends its design and uses. This is because digital technologies transform the reality in which we live by creating a new environment, new forms of (artificial) agency, and new affordances for our interactions with them", Carl Őhman and David Watson, "Digital Ethics: Goals and Approaches", in Carl Őhman and David Watson, eds., *The 2018 Yearbook of the Digital Ethics Lab* (Cham: Springer Nature, 2019), 2.

potentially unlawful public surveillance. Concurrently, government regulations are invoked to restrain its uses (examples i, j and k).

(i) The extraordinary intrusiveness of facial recognition should not be underestimated.[31]

(j) The technology's deployment has quickly outpaced regulation…. The potential for weaponization and abuse of facial-analysis technologies cannot be ignored.[32]

(k) Hannah Couchman, advocacy and policy officer at Liberty says ... "We are still horrified to see how quickly this technology is expanding in use throughout the private sector into retail environments".[33]

A case in point of how FR may take a disproportionately dystopian turn is provided by the Chinese government, in its effort to establish a police state. We learn that Chinese police employ FR to fine jaywalkers in the street and show their faces on giant screens in order to shame the pedestrians into compliance. Even worse, in the autonomous region of Xinjiang, in north-west China, authorities have been scanning the facial features of hundreds of thousands of Muslim Uighurs since 2017, while enforcing arbitrary detention and political re-education, allegedly to prevent terrorism on a religious basis. Thus, the Uighur community suffers mass surveillance and persecution that are assisted by state-of-the-art FR technology.

(l) AI companies such as CloudWalk, Yitu and SenseTime have partnered with the Chinese government to roll out facial recognition and predictive policing, particularly among minority groups such as the Uighur Muslims.[34]

True, the scary technology-aided violation of human rights now occurring in China is not the kind of political landscape that normally concerns human rights activists and civil society in more democratic countries. Nonetheless, "China's surveillance dragnet"[35] and brutal treatment of minorities, reported by outraged Western media (including a considerable section of the textual materials under analysis) and recently condemned by the UN, have further raised awareness about the importance of "watching the watchers".[36]

More generally, "the debate on the ethical impact and implications of digital technologies has reached the front pages of newspapers"[37] also in Western democracies, where incidents such as the

[31] Cynthia Wong, "We Underestimate the Threat of Facial Recognition Technology at Our Peril", *The Guardian* (17 August 2018), *www.theguardian.com*.
[32] Drew Harwell, "Amazon's Facial-Recognition Software Has Fraught Accuracy Rate, Study Finds", *The Washington Post* (27 January 2019), *www.washingtonpost.com*.
[33] Natasha Bernal, "Why We Should All Be Worried about Britain's Facial Recognition Experiment", *The Telegraph* (1 February 2019), *www.telegraph.co.uk*.
[34] *The Financial Times*, "How Big Tech Is Struggling with the Ethics of AI" (29 April 2019), *www.ft.com*.
[35] Emma Graham-Harrison and Juliette Garside, "Revealed: Power and Reach of China's Surveillance Dragnet", *The Guardian* (24 November 2019).
[36] Hannah Devlin, "'We Are Hurtling towards a Surveillance State': The Rise of Facial Recognition Technology", *The Guardian* (5 October 2019), *www.theguardian.com/technology*.
[37] Floridi, "Translating Principles into Practice", 185.

2018 Cambridge Analytica Scandal and Amazon's secret AI recruiting tool that showed that recruiting processes were biassed against women have awakened public consciousness to the social and political consequences of unregulated data-driven technology.[38]

3.2 *Lack of consent, algorithmic bias, loss of privacy*

The awareness that FR is expanding in largely uncharted territory explains why the news media frequently mention legal terms and concepts in its coverage, as well as references to the First Amendment in the US[39] and the GDPR for Europe. A first major issue remains that of the legal basis for the collection of biometric data, 'affirmative' user consent and the right to anonymity in public, which is no longer 'granted' nor 'guaranteed'.

(m) What makes facial recognition different from other biometrics is that it's very easy to collect from a person without their noticing.[40]

In the highly competitive digital economy, data are 'gathered' without consent, 'pilfered' and 'stolen' through 'covert trickery'. Faces are 'tracked' within seconds and "in secret" since, unlike fingerprints and DNA samples, FR does not require much physical proximity. Current general data protection laws, however, require explicit consent to collect personal data. One of the reasons for this mandate is that data aggregation into a virtual identity may become ethically significant. It means that adding up sensitive information (political and religious affiliations, consumption patterns, health habits etc.), gleaned from the Internet, may potentially lead to predictive privacy harms for individuals and groups.

Furthermore, gender and racial bias, mistaken identities, false positives and identity theft are listed as actual risks (example n). At the lexical level, this anxiety is further conveyed by terms like 'alter', 'discriminate', 'error rates', 'misassign', 'misclassify', 'misidentify', 'mistake', 'obscure', 'skew/skewed' that are charged with negative associations. What is felt as a paradox in the ethics debate over FR is that algorithms, which should correct human fallibility, end up enhancing it and making individuals and communities more vulnerable, threatening human rights and civil liberties.

(n) Last year, the American Civil Liberties Union (ACLU) found that Amazon's Rekognition software wrongly identified 28 members of Congress as people who had previously been arrested. It disproportionately misidentified African-Americans and Latinos (*Guardian*, 29 July 2019).[41]

Lastly, the news media voice the fear that loss of anonymity in public spaces may curb public

[38] "The resulting gap between the design and operation of algorithms and our understanding of their ethical implications can have severe consequences affecting individuals as well as groups and whole societies", Mittelstadt et al., "The Ethics of Algorithms", 2.
[39] See example (n) below.
[40] Jenny Jones, "Why I'm Fighting Police Use of Big Brother-Style Facial Recognition Technology", *The Telegraph* (3 August 2018), *www.telegraph.co.uk/technology*.
[41] Sample, "What Is Facial Recognition".

protest, political participation and legitimate dissent through the unlawful targeting of activists due to the constant surveillance that is augmented by facial recognition technology. Concurrently, the ubiquity of networked cameras will result in the privatisation of public urban spaces and "geofencing", i.e. defining a virtual boundary around a real-world geographical area.

(o) Civil liberties experts warn that it can also be used to secretly identify people – potentially chilling Americans' ability to speak freely or simply go about their business anonymously in public.[42]

It appears that the next step, still in its pilot stage and not free from contention,[43] will be emotion AI and artificial empathy. In this case, algorithms are trained to read facial expression and body language, all signals that are intentionally or unwittingly sent in interaction.[44] Arguably, the major anthropological change that will follow will see quintessentially human acts transferred to machines,[45] while the Internet of Things will become bidirectional because of the flow of man-machine interaction.

It is also worth noticing that the discursive unfolding of the ethics debate over FR in public discourse sees the involvement of experts that 'argue', 'explain', 'question', 'say', 'suggest' and 'warn'. Expert opinion that we find embedded in texts addressed to a general audience aims to translate specialised knowledge straight from the computer lab and to provide a theoretical framework for the lay public[46] that is empirically engaged in the understanding of technology and demands explanations and regulations.

(p) Ultimately, experts say the field is still nascent, and a joint approach between the private and public sectors is required to build consensus.[47]

Taking our textual selection as a small but meaningful sample of the ways in which the ethics debate is empirically emerging in the conversation between the private and public sector, we cannot dismiss its discursive polarisation but we also notice the orientation towards a more flexible approach to technology (example p), but only if in reasonable compliance with democratic values.

## 4. Concluding Remarks

The analysis has focused on the current discursive unfolding of the ethical implications of FR technology by reflecting upon the divergent viewpoints of the AI corporate world and voices from

[42] Natasha Singer, "Amazon Is Pushing Facial Technology That a Study Says Could Be Biased", *The New York Times* (24 January 2019), *www.nytimes.com*.
[43] Douglas Heaven, "Why Faces Don't Always Tell the Truth about Feelings", *Nature* (26 February 2020), *www.nature.com*.
[44] Emotion Research Lab, "Moods or States of Mind Have Come to Stay", emotionresearchlab.com/blog.
[45] The blurring divide between biological and synthetic humans is the main theme of Ian McEwan's new novel, *Machines like Me* (London: Cape, 2019). See also Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013).
[46] See Giuliana Garzone, "News Production and Scientific Knowledge: Exploring Popularization as a Process", in Giancarmine Bongo and Giuditta Caliendo, eds., *The Language of Popularization: Die Sprache der Popularisierung* (Bern: Peter Lang, 2014), and Marina Bondi et al., eds., *Discourse In and Through the Media: Recontextualizing and Reconceptualizing Expert Discourse* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2015).
[47] *The Financial Times*, "How Big Tech Is Struggling with the Ethics of AI".

civil society in the UK and the US, as they are reported and amplified in the news media. The hybridisation of expert, corporate and popular views is, after all, what lay people are regularly exposed to when they try to respond to the fast advancements of technological innovation.

As has been seen, the ethics debate over FR technology involves a complex set of issues that have come to the forefront in public discourse, and consequently in the news media, under the pressure of the fast implementation of machine learning in a variety of societal contexts, at times with unexpected and unpleasant outcomes. Strongly favoured by the global AI industry, this process has generated benefits for society in terms of security, safety and a better consumer experience, as promised by FR developers. However, it has also given rise to forms of bias, discrimination, predictive profiling and threats to basic human rights and civil liberties, up to political repression, as the one suffered by the Uighur people in China.

Quite expectedly, the AI industry adopts a narrative of technological progress largely oblivious to the far-reaching anthropological, political and social consequences of AI, while the news media report on the more problematic sides of AI. Nonetheless, this is evolving into an interesting phenomenon, an emerging public debate that is striving to forge a manageable digital ethics, putting algorithms and their ethical import under scrutiny.

As characteristic of the nonlinear reception of technological innovation within the complexities of science-society relations, the ethics debate is discursively polarised between expectations and threats, benefits and risks, but also empirically engaged in the discursive negotiation of the same. By itself, this collective attempt is what makes FR technology more human.

Annalisa Zanola

# 'Informed Consent' (IC) in Health Literacy (HL). State-of-the-art of an Elaborate Legal-lay Communication Process

**Abstract**: Informed consent (IC) is a fundamental ethical and practical part of patient care, and a critical component of clinical research: it is a mandatory legal requirement, a fundamental ethical step, and a crucial practical part both of patient care and of clinical research. A linguistic and cross-cultural approach to the study of the IC is especially complex, as it takes place at the intersection of lay (the patients or the research subjects), scientific (the physician or the researchers), and legal (the regulatory framework) discourses. From the Universal Declaration of Human Rights (1948), to the Oviedo Convention (1997-99), up to the 'Carta di Firenze' Document (2005), this contribution is aimed at defining the value of IC in terms of patients' understanding, satisfaction, and anxiety. As the state-of-the-art definition stands at present, IC is an ethical concept, but more work still is needed in the area of 'understanding' health and illness.

Keywords: *Health Communication*, *Health Literacy*, *Informed Consent*, *Legal-Lay Communication*

## 1. Introduction

Informed consent (IC) has been defined as "the heart and soul of the ethical dimension of science... foundational to research that involves human beings... A cornerstone in the ethics of scientific research".[1] In 2013, the U.S. Presidential Commission for the Study of Bioethical Issues defined it also as "the cornerstone of the conduct of ethical human subject research".[2] In short, IC is a fundamental principle of research ethics. Though being a relatively new concept, its history follows the broader evolution of bioethics and ethical human subject research, up to the very complex issues related to the most recent advances in medicine, technology and biotechnology.

Apart from being an ethical principle, however, IC is a 'contextually embedded practice',[3] made up of texts and conveying information through them. Moreover, it activates a very complicated communication mechanism between the IC principal users, that is, the patients and the doctors. The patient is becoming (and the patients' relatives are themselves becoming) more and more informed on any health issue, both at scientific and at legal levels: what they are all looking for is not only a qualified 'technician' but also a passionate 'supporter' and a

[1] Margaret Thomas and Nicole Pettitt, "Informed Consent in Research on Second Language Acquisition", *Second Language Research*, 33.2 (April 2017), 271-288.
[2] Presidential Commission for the Study of Bioethical Issues, *Informed Consent Background,* (Bioethics Research Library, Presidential Commission for the Study of Bioethical Issues, 2014), *bioethicsarchive.georgetown.edu*.
[3] The expression appears in: Morten Pilegaard and Hann Berg Ravn, "Informed Consent: Towards Improved Lay-friendliness of Patient Information Sheets", *Communication and Medicine*, 10.3 (January 2013), 201-211.

'caretaker'. Moreover, in past centuries, from Gregory to Percival and Hooker,[4] literature on the topic underlined the fact that the doctor, far from being a mere informant and a scientist, must be a good communicator.[5] When dealing with the patient, the doctor must have sensitive specialised knowledge together with a particularly strong psychological background, an in-depth knowledge of the main communicative and relational mechanisms (both verbal and non-verbal, cognitive and emotional) and a holistic vision of illness, along with a deep understanding of the varied signs and expressions of human discomfort and full consciousness of the criticality of information transmission for decision making.[6]

It is in this complicated context that the patient and his/her relatives have to deal with IC, which is a mandatory legal requirement, a fundamental ethical step, and a crucial part both of patient care and of clinical research. The solicitation of IC for medical procedures or research is also a significant form of legal-lay communication.[7] The process of obtaining it – that is guided and structured by requirements stated by the law – can be described as the interaction between the lay participant (patient) and a medical representative (physician): IC is a hybrid concept "which speaks both to physicians' disclosure obligations and patients' willingness to undergo a particular treatment".[8] The communication process in this special Health Literacy (HL) context takes place in the shadow of the law, whose important role is that of prodding physicians to be more attentive to patients' rights regarding decision-making.[9] As understanding the written information supplied in the document can be challenging for patients without appropriate verbal explanation by the health professional/researcher, efforts have been made to seek strategies to improve information delivery and to enhance patient/subject understanding.[10]

Our contribution aims at reviewing progress on this issue, calling attention to evidence that IC has a very long history: some debates about the role of IC in health communication and HL take their roots in ancient times. The final goal will be that of defining the real value and meaning of IC in terms of patients' understanding, satisfaction, and anxiety or other psychological distress.

## 2. Literature Review

[4] John Gregory, *Observations on the Duties and Offices of a Physician and on the Method of Prosecuting Enquiries in Philosophy* (London: Strahan and Cadell, 1770); Thomas Percival, *Medical Ethics: Or, a Code of Institutes and Precepts, Adapted to the Professional Interests of Physicians and Surgeons* (Manchester: Russell, 1803); Worthington Hooker, *Physician and Patient: Or, a Practical View of the Mutual Duties, Relations and Interests of the Medical Profession and the Community* (New York: Baker and Scribner, 1849).

[5] Barbara Stanley et al., "The Elderly Patient and Informed Consent: Empirical Findings", *JAMA,* 252.10 (10 September 1984), 1302-1306.

[6] Dawn Stacey et al., "Shared Decision Making Models to Inform an Interprofessional Perspective on Decision Making: A Theory Analysis", *Patient Education and Counseling*, 80.2 (August 2010), 164-172.

[7] John Conley et al., "The Discourse of DNA: Giving Informed Consent to Genetic Research", in Chris Heffer et al., eds., *Legal-Lay Communication: Textual Travels in the Law* (Oxford & New York: Oxford U.P., 2013), 247-265.

[8] Jay Kats, "Informed Consent: Must it Remain a Fairy Tail?", *Journal of Contemporary Law and Policy*, 10 (Spring 1994), 69-78.

[9] Stacey, "Shared Decision Making Models".

[10] Srikant Sarangi, "Owning Responsible Actions/selves: Role-relational Trajectories in Counselling for Childhood Genetic Testing", in Jan-Ola Östman and Anna Solin, eds., *Discourse and Responsibility in Professional Settings* (Sheffield: Equinox, 2016), 37-62.

Effective doctor-patient communication has a central clinical function. As the history of medicine demonstrates, the doctor must be familiar with the complexity of medical communication.[11]

2.1 *The early origins*

Already at the times of the ancient Greek and Roman civilisation, documents have been found that showed how the doctor's intervention had, in some way, first to be approved by the patient. Plato (Law IV) had already foreseen the problems, the procedure, and the modes of information that are, in synthesis, at the root of the principles of the present formula of IC and correlated the practice of information and consensus with the quality and social position of the patient. The doctor should only guarantee that a fundamental principle of medicine of all times is applied, that is: "in disease, focus on two aims, to improve and not to cause damage".[12]

The Hippocratic physician cared about the patient's suffering; however, s/he was also concerned with her/his own reputation, taking all necessary measures to avoid medical failure or – worse – the death of the patient, even if this meant not taking the suffering of the patient into adequate consideration. The concept of consensus did not exist at that time, although some kind of awareness of the importance of preventive information may be identified. From the early origins, following the Hippocratic tradition, the relationship between doctor and patient was based on two definite criteria, represented by the professional duty of the physician to do what is the best for the patient on the one hand, and on the other by the duty of the patient to accept the physician's decisions and intervention unconditionally and unreservedly. The foundations of this relationship are based in the famous Hippocratic Oath (c. 400 BC), provided below in a translation from Greek by Jones (end of the 19th century):

> I swear by Apollo Physician, by Asclepius, by Health, by Panacea and by all the gods and goddesses, making them my witnesses, that I will carry out, according to my ability and judgment, this oath and this indenture. To hold my teacher in this art equal to my own parents; to make him partner in my livelihood; when he is in need of money to share mine with him; to consider his family as my own brothers, and to teach them this art, if they want to learn it, without fee or indenture; to impart precept, oral instruction, and all other instruction to my own sons, the sons of my teacher, and to indentured pupils who have taken the physician's oath, but to nobody else. *I will use treatment to help the sick according to my ability and judgment, but never with a view to injury and wrong-doing.* Neither will I administer a poison to anybody when asked to do so, nor will I suggest such a course. Similarly I will not give to a woman a pessary to cause abortion. But I will keep pure and holy both my life and my art. I will not use the knife, not even, verily, on sufferers from stone, but I will give place to such as are craftsmen.[13]

[11] Alessandro Porro, "La dimensione psichica della terapia antica", in Carlo Cristini, ed., *Il cambiamento psicoterapeutico* (Milano: FrancoAngeli, 2012), 16-22; Alessandro Porro and Carlo Cristini, "La relazione medico-paziente: storia e attualità", *Ricerche di psicologia*, 4 (2012), 621-638.

[12] Vito Mallardi, "Le origini del consenso informato / The Origin of Informed Consent", *Acta Othorhinolaryngologica Italica,* 25.5 (2005), 312.

[13] Hippocrates, *The Oath,* in *Hippocrates Collected Works I*, trans. by W. H. S. Jones (Cambridge: Harvard U.P., 1868), *daedalus.umkc.edu/hippocrates*, emphasis mine.

The Hippocratic physician respected a principle of professional responsibility that was more religious and moral than 'legal', in the modern meaning of the word: from a legal point of view, the doctor's formal commitment was very weak inasmuch as it depended upon regulations drafted by human beings. Moreover, over the centuries the certainty that the doctor acted in the interest of the patient's well-being became so consolidated that the physician came to be endowed with moral authority and a kind of legal impunity, conditions that corresponded with the patient's duty of obedience and subjection.[14]

The submissive and passive attitude of the patient towards the physician may find its origins here. The patient's natural tendency to be psychologically subjected to the physician's choices was borne out by traditions thousands of years old. For centuries, sick people have always followed the treatment given by the doctor with an almost spontaneous attitude of respect and gratitude, never asking for any explanation regarding the therapeutic effects of the treatment itself: for his/her part, the 'caretaker' refrained from taking any initiative to inform the patient or the patient's family, unless required.

### 2.2 *From the 17th to the 19th century*

Two milestones of medical ethics, published in England between the end of the 17th and the beginning of the 18th century, show that the doctor had to be a good communicator and a 'caretaker'.[15] In 1770, John Gregory described communication in medicine like a sort of art:

> I shall endeavour, however, to set this matter in such a light ... that the system of conduct in a physician, which tends most to the advancement of his art, is such as will most effectually maintain the true dignity and honour of the profession, and even promote the private interest of such of its members as are men of real capacity and merit.[16]

Just a few years after Gregory, Percival's writings proposed a relationship between doctor and patient set on a different tone. The themes of value and dignity remained unchanged but the patient was no longer seen as free as it was previously: the patient's freedom was not absolute, and the doctor maintained that informing him/her could be detrimental to the positive outcome of the therapy. In short, it was right that the patient was 'kept in the dark'.

### 2.3 *The 20th century*

In 1986, Faden and Beauchamp indicated 1957 as the birth date of the IC.[17] In particular, the authors referred to Pernick's and Kats's articles[18] that showed the first usage of the label 'informed consent' in the court decision on 'Salgo vs Leland Stanford Jr. University': the legal

[14] Mallardi, "Le origini del consenso informato", 312-327.
[15] Gregory, *Observations*; Percival, *Medical Ethics*; Hooker, *Physician and Patient*.
[16] Gregory, *Observations*, 9-10.
[17] Ruth R. Faden and Tom L. Beauchamp, *A History and Theory of Informed Consent* (New York and Oxford: Oxford U.P., 1986).
[18] Kats, "Informed Consent", 77; Marc Pernick, "The Patient's Role in Medical Decision-Making: A Social History of Informed Consent in Medical Therapy", in President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, *Making Healthcare Decision: Studies on the Foundations of Informed Consent* (Washington: U.S. Government Printing Office, 1982), 1-35.

case[19] involved a patient named Martin Salgo, "who awoke paralyzed after aortography, having never been informed that such a risk existed".[20] The decision held that failure to disclose risks and alternatives was cause for legal action on its own. The concept was further elaborated in 1960, during the 'Natanson vs Kline court case', quoted by Murray,[21] where the court held the medical team responsible for a standard of disclosure of risks that a reasonable practitioner would provide a patient: in this case, the patient, Irma Natanson, suffered severely disabling burns as a result of cobalt irradiation for breast cancer in spite of having been told that there were no risks associated with this treatment. Nevertheless, by no means was this legal resolution accepted carelessly by the public opinion, and by the medical community above all. Following Kats:

> The emerging legal idea that physicians were from now obliged to share decision making authority with their patients shocked the medical community, for it constituted a radical break with the silence that had been the hallmark of physician-patient interactions through the ages.[22]

In other words, the two court decisions formalised the patients' right to make autonomous choices.

In fact, it seems that the first example of a legally recognised IC (conceived of in terms of asking patients' permission before activating any medical procedure) dates back the 18th century. Gallin reports that:

> In an English lawsuit, 'Slater vs Baker & Stapleton', two surgeons were found liable for disuniting a partially healed fracture without the patient's consent. This case set an important precedent described by the court: 'Indeed it is reasonable that a patient should be told what is about to be done to him that he may take courage and put himself in such a situation as to enable him to undergo the operation.[23]

Some forms of IC in medical contexts may be discovered even to about five centuries ago, although no 'medical intervention' was so clear at that time. Nevertheless, we read of an example of that time in a contribution by Selek,[24] who reports the case of a father contracting with the doctor in order to 'remove urinary stones' from his son: he had to agree before a court that he would not sue the doctor if anything went wrong.

Apart from these isolated pieces of evidence of the usage of the IC label in modern and contemporary ages, the concept was fully legitimised in 1947 with "The Nuremberg Code": this document is regarded as the first major code to contain guidelines on the ethics of medical research for the protection of human subjects in experiments. It was introduced after the Nuremberg trials, when Nazi doctors were convicted of the crimes committed during human experiments on concentration camp prisoners. The Code, based on ten points, attempted to give

[19] *Salgo vs Leland Stanford Jr. Univ. Bd. Trustees* (1957), https://caselaw.findlaw.com.
[20] Douglas S.T. Green and C. Ronald MacKenzie, "Nuances of Informed Consent: The Paradigm of Regional Anesthesia", *HSS journal: The Musculoskeletal Journal of Hospital for Special Surgery*, 3.1 (February 2007), 115.
[21] Peter Murray, "The History of Informed Consent", *The Iowa Orthopaedic Journal* (January 1990), 104-109.
[22] Kats, "Informed Consent", 72.
[23] John Gallin, "A Historical Perspective on Clinical Research", in John Gallin and Frederick Ognibene, eds., *Principles and Practices of Clinical Research,* Third Edition (London: Elsevier, 2012), 6.
[24] Salih Selek, "A Written Consent Five Centuries Ago", *Journal of Medical Ethics,* 36.10 (2010), 639.

clear rules about what was legal and what was not when conducting human experiments. The first and most important point states that anyone participating in an experiment must give 'voluntary consent': that is, nobody can be forced to participate in human trials and all participants must understand the potential risks. Moreover, the ninth point declares that:

> During the course of the experiment the human subject should be at liberty to bring the experiment to an end if he has reached the physical or mental state where continuation of the experiment seems to him to be impossible.[25]

Therefore, central to "The Nuremberg Code", which was the first to target the protection of research subjects, was the concept of subject consent. The Code was mainly enacted to ensure that participants were informed about research and voluntarily consented to participate in.

After 1947, several declarations containing recommendations for doctors followed over the years to monitor human experiments. In 1948, *The Declaration of Geneva* (known as 'Physician's Oath') was adopted by the General Assembly of the World Medical Association at Geneva (later amended in 1968, 1983, 1994 and editorially revised in 2005 and 2006).[26] It was a declaration of a physician's dedication to the humanitarian goals of medicine, intended as a revision of the 'Hippocratic Oath' into a formulation of that oath's moral truths, which could be comprehended and acknowledged in a modern way, where patient's health became doctor's 'first consideration' (article 4).

The drafting of more recent guidelines in documents such as the *Belmont Report*[27] and the *Declaration of Helsinki*,[28] followed by the *International Guidelines for Biomedical Research involving human subjects* by the CIOMS (Council of International Organisations of Medical science) in collaboration with the World Health Organisation (WHO),[29] up to the most recent guidelines designed to help applicants in getting suitable proposals for Horizon 2020 funding[30] have streamlined the guidance on conducting research and specifically on how research subjects should be informed about studies in which they are involved.

All these guidelines refer to the process of obtaining IC as a prerequisite to conducting research. They emphasise different aspects of how IC should be obtained. For example, the *Nuffield Council on Bioethics*[31] stipulates that the consent of a senior family member or community leader may be required in addition to that of an individual taking part; or, the CIOMS prefers that participants give their written consent; or, the *Helsinki Guidelines* explain how to manage in the case of minors or participants that are not able of giving consent alone. The aim of all the guidelines is to protect participants from any form of harm.

[25] "The Nuremberg Code" [1947], in Alexander Mitscherlich and Fred Mielke, eds., *Doctors of Infamy: The Story of the Nazi Medical Crimes* (New York: Schuman, 1949), xxiii-xxv, *www.cirp.org*.
[26] *The Declaration of Geneva* (1948), adopted by the General Assembly of World Medical Association at Geneva Switzerland (September 1948), *www.cirp.org*.
[27] *The Belmont Report*, The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, Department of Health, Education, and Welfare (April 1979), *www.hhs.gov*.
[28] *The Declaration of Helsinki*, The World Medical Association (1964-2008), *www.wma.net*.
[29] *International Ethical Guidelines for Biomedical Research Involving Human Subjects*, Council for International Organizations of Medical Sciences and World Health Organization (1993), *apps.who.int*.
[30] *Horizon 2020 Programme: Guidance How to Complete Your Ethics Self-assessment*, EUROPEAN COMMISSION Directorate-General for Research & Innovation (4 February 2019), http://ec.europa.eu.
[31] *The Nuffield Council on Bioethics, nuffieldbioethics.org*.

## 3. IC in Lay Discourse

The complexity of IC understandability is linked to the complexity of the IC concept in itself, and to its sociolinguistic nature. On the one hand, doctors and researchers treat it as an event; on the other, patients and participants talk about it as a discursive process. In other words, it is:

> A process that unfolds over the course of multiple communicative interactions. Like many such processes ... it is open-ended, unstable, and sometimes unsettling. Patients import, re-contextualize, and reanimate texts from many sources as they talk about consent with the interviewer; recount (and often perform) conversations with friends, families, and even themselves; and describe their exposure to various public discourses.[32]

While talking about their IC or while filling in the IC forms, patients and participants produce constantly new meanings, causing them to challenge their previous understanding. At the end, when they sign the IC, they are supposed to be 'informed' about any health issue they are directly involved in and they 'consent' to the provision of that information in that form. They will sign it, as it is imposed by law, and in doing so they will transform their act into something ordinary.

### 3.1 *IC understandability*

Two studies on IC understandability factors have recently underlined the fundamental interaction between IC clarity and its ethical role:[33] if the participants do not understand its content, the researcher does not satisfy the ethical requirements to ensure that the patient is making an 'informed' decision to take part in the study, and will, therefore, not be adhering to the principle of respect for the person and for human dignity. In other words, there is at least one very strong ethical and legal implication to consider, that is, participants who do not figure out what IC implies are not providing their IC fully.

In fact, understanding even basic health information seems to be a very common and frequent issue all around the world, both for medical and for research issues. Weak health literacy and the complexity of some scientific/medical written and/or oral texts are among the most common causes of lack of understanding in IC. The 2004 *American Institute of Medicine Report*, released by the Committee on Health Literacy, insisted on the relevance of good HL as a background for IC:

> Many American adults have difficulty understanding and acting upon health information. A great deal of health information, from insurance forms to advertising, contains complex text. Even very literate people may have trouble obtaining, understanding, and using health information: a surgeon

[32] Conley et al., "The Discourse of DNA", 248.

[33] Nikolina Duvall Antonacopoulos and Ralph Serin, "Comprehension of Online Informed Consents: Can it be improved?", *Ethics and Behavior,* 26.3 (2016), 177-193; Nathalie Ilič et al., "Informed Consent Forms in Oncology Research: Linguistic Tools Identify Recurrent Pitfalls", *AJOB Primary Research,* 4.4 (2013), 39-54.

> may have trouble using an insurance form, a science teacher may not understand information about a test of brain function, and an accountant may not know when to get a mammogram.[34]

HL is the degree to which individuals can obtain, process, and understand the basic health information and services they need to make appropriate health decisions. However, HL goes beyond the individual. It also depends upon the skills, preferences, and expectations of those health information providers, that is: doctors, nurses, administrators, home health workers, the media, and many others. Health literacy arises from a convergence of education, health services, and social and cultural factors, and brings together research and practice from diverse fields.

Brach et al. have widely demonstrated that:

> adults with limited health literacy ... experience more serious medication errors (Schillinger et al., 2005), higher rates of emergency room visits and hospitalizations (Baker et al., 2002), worse preventive care and health outcomes for their children (Sanders et al., 2009), and increased mortality (Sudore et al., 2006; Bostock and Steptoe, 2012; Yaffe et al., 2006) compared with individuals with adequate health literacy.[35]

Moreover, HL has become recognised as an important component to delivering culturally and linguistically appropriate services. The 2001 final report of the 'National Standards for Culturally and Linguistically Appropriate Services'[36] acknowledges that addressing HL is integral to providing quality health care to diverse populations.

Miscommunication negatively affects patient care and outcomes in lots of daily situations. Misunderstandings occur not only in clinical situations, such as when treatment options and medicine instructions are discussed, but also when receptionists ask for a signature on a form and billing staff discuss covered services and financial responsibilities. Moreover, even individuals who ordinarily have adequate HL may have difficulty processing and using information when they are sick, frightened, or otherwise impaired. Systems should therefore be redesigned to accommodate the unpredictability of limited health literacy skills.[37] In other words, literacy, language, and culture are intertwined and improve the organisation's linguistic and cultural competence.[38] Finally, independently from the commitment of health organisations all around the world, participants may still have poor IC comprehension, due to careless reading, low-grade reading level, sentence length, or absence of pictures and headings. In

[34] *Health Literacy: A Prescription to End Confusion* (National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division [HMD] division, April 2004), *www.nationalacademies.or*.

[35] Cindy Brach et al., *Ten Attributes of Health Literate Health Care Organizations: NAM Perspectives. Discussion Paper* (Washington DC: National Academy of Medicine, 2012), https://nam.edu.

[36] *National Standards for Culturally and Linguistically Appropriate Services in Health Care: Final Report*, U.S. Department of Health and Human Services, Office of Minority Health, (2001), 1, http://bit.ly/national-standards-report.

[37] Rima E. Rudd, "Improving Americans' health literacy", *New England Journal of Medicine*, 363.24 (December 2010), 2283-2285.

[38] Dennis Andrulis and Cindy Brach, "Integrating Literacy, Culture, and Language to Improve Health Care Quality for Diverse Populations", *American Journal of Health Behaviour*, 31.1 (September-October 2007), 122-133; Rebecca Sudore et al., "Unraveling the Relationship between Literacy, Language Proficiency, and Patient-Physician Communication", *Patient Education and Counseling*, 75.3 (June 2009), 398-402.

principle, limited health literacy has been associated with less primary intervention[39] and poor health outcomes.[40] The existing literature points to a strong relationship between patients' literacy skills and how much they know about their disease: there is a clear connection between the ability to obtain information and the need to turn that information into knowledge.

## 4. IC in Scientific Discourse

From a clinical perspective, the care and treatment of patients come before anything else; the research setting, by contrast, is focused on experiments or clinical trials. In the first case, doctors are concerned with seeking permission to treat patients that, by consenting, will accept risks related to treatment; in the second case, researchers look for patients' consent in order to test their study. In both cases, however, the peculiarity of IC consists in the process of informing the patients (or participants) about the planned procedure and seeking their 'voluntary' acceptance of the procedure itself.

As a result, understanding and voluntarism seem to be two fundamental prerequisites to IC, on the side of the patient. On the one hand, IC requires that the patient fully understands the information given and its relationship with his/her own personal situation. On the other, the patient must be free from "coercion and from unfair persuasions and inducements".[41] In principle, in any medical treatment as well as in research, communication between patient and doctor (or, participant and researcher), doctor's understanding of the patient's illness and fears, and patient's adherence to the doctor's recommendations are essential for correct and effective IC. In order to guarantee the process, the patient must be also given the information needed to understand a procedure by means of simple explanations: in this way, he/she will be able to make healthcare decisions and authorise the doctor to make the proposed treatment.

These considerations take us to the next step, which is related to the importance of IC legal issues.

## 5. IC in Legal Discourse

'Information' is strictly joined to 'consent' in the text of the 'Oviedo Convention' (dated 1997-1999),[42] signed by most of the European states, which underlines the principle according to which a person has to give the necessary consent for treatment expressly, in advance, except in emergencies, and can freely withdraw such consent at any time. The Convention stipulates that all patients have a right to be informed about their health, including the results of predictive

[39] Tracy Scott et al., "Health Literacy and Preventive Health Care Use Among Medicare Enrollees in a Managed Care Organization", *Medical Care*, 40.5 (May 2002), 395-404.
[40] Darren A. DeWalt et al., "Literacy and Health Outcomes: A Systematic Review of the Literature", *Journal of General Internal Medicine*, 19.12 (December 2004), 1228-1239.
[41] Alan Meisel et al., "Toward a Model of the Legal Doctrine of Informed Consent", *The American Journal of Psychiatry*, 143.3 (March 1977), 287.
[42] *Convention for the Protection of Human Rights and Dignity of the Human Being with Regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine* (Oviedo: European Treaty Series, 4 April 1997), *www.coe.int*.

genetic tests, and also recognises the patient's right not to know. Chapter 2, Article 5, declares that:

> An intervention in the health field may only be carried out after the person concerned has given free and informed consent to it.
>
> This person shall beforehand be given appropriate information as to the purpose and nature of the intervention as well as on its consequences and risks.
>
> The person concerned may freely withdraw consent at any time.

More recently, the 'Carta di Firenze' document, published in 2005, reinforced the same concept by stating the following ten rules:

1. The relationship between the healthcare professional and the patient must guarantee the autonomy of the person's choices.
2. The relationship is equal; it must not, therefore, be influenced by any difference in knowledge (the healthcare professional dictates the rules, the patient obeys), but marked by shared responsibilities and freedom of criticism.
3. The diagnostic/therapeutic alliance is based on the recognition of the respective competences and is based on mutual loyalty, honest information and respect for the values of the person.
4. Correct information helps to guarantee this relationship, ensure its continuity and it is an indispensable element for the autonomy of the patient's choices.
5. Time devoted to information, communication and relationship is time devoted to health.
6. Correct information requires clear and shared language. It must also be accessible, understandable, reliable, accurate, complete, evidence-based, credible and useful (decision-oriented). It should not be discriminated on the basis of the patient's age, gender, ethnic group, religion, in accordance with the patient's preferences.
7. Clear understanding of the benefits and risks (negative effects) is essential for the patient's choices, both for the prescription of drugs or other therapies in clinical practice, and for his or her entry into a trial.
8. Any declaration of any commercial or organisational conflict of interest should be part of the information process.
9. Information on therapeutic alternatives, inequality of service provision and the best diagnostic and therapeutic opportunities is essential and promotes, as far as possible, free patient's choices.
10. The doctor shall communicate the diagnosis and prognosis with humanity in a comprehensive way, respecting the patient's wishes, values and preferences.[43]

IC tends to reflect the concept of autonomy and free decision of the person requiring medical intervention. Seeking and obtaining IC, however, involves different disciplines at the same time, namely medicine, law, and moral philosophy: in fact, IC in medicine is rooted in case law, whereas in research it has its basis in ethical codes and statutes.[44] In other words, IC is a hybrid and multi-faceted text, which has gained over the years – and is still gaining – more and more importance in juridical interpretations, influencing at the same time the daily routine of medical professions.

[43] *La Carta di Firenze / The Chart of Florence* (Florence: Società Italiana di Farmacologia, 2005), *www.pharmtox.org*, translation mine.

[44] Marcela Del Carmen and Steven Joffe, "Informed Consent for Medical Treatment and Research: A Review", *The Oncologist*, 10.8 (September 2005), 636-641.

## 6. Conclusion

From a linguistic point of view, the IC expression 'informed consent' sounds like a hendiadys, which was born, was brought up and proliferated in a professionally and technically bound context, namely in the medical one. In spite of its strong technical foundation, however, IC boundaries have become wider and wider during the centuries, as the hendiadys was adopted everywhere, for consistent interpretative reasons. As our research has shown, defining it in all its implications and connotations is not possible unless the item is studied both diachronically and synchronically: in this second case in particular, any effort in understanding its meanings and implications must come out at the intersection of lay, scientific, and legal discourse. Therefore, a new interdisciplinary approach to the definition of the concept should be created from scratch: legal, medical and linguistic competences should find here a common ground of interest and join as a result, with the common goal of improving comprehensibility and communication in popularising scientific discourse.

As for communicative effectiveness, one of the most challenging aspects of the IC process is that of ensuring that the information provided to potential participants is both comprehensive and clear enough for the reader to understand fully. In other words, researchers must be mindful both of the ethical imperative of IC, and of the applicable regulations and laws that enforce the ethical requirements. Additionally, different research protocols and populations of research participants can necessitate alternate processes and the inclusion of additional information. For example:

> content might need to be translated into another language or written for a lower-literacy audience. Forms might need to include in-depth information about obtaining tissue samples, risky procedures, or specifically include information pertaining to alternative treatments. The informed consent process must provide enough information for research participants to understand the proposed study and its risks and potential benefits without overwhelming them with cumbersome or overly technical information.[45]

To be effective, IC must strike a balance between too much and too little information. In fact, both the quantity and the quality of IC information would deserve critical and significant scrutiny on the side of linguistic and communication experts, in order to improve participant's understanding of the required information, to document that the participant was fully informed, and to establish the participant's voluntary (and autonomous) decision to take part into any medical treatment and/or research. Linguistic support to the writing of any IC document should therefore be taken into consideration seriously for the future, in order to protect either the interests of vulnerable groups from harmful research carried out by powerful organisations or the study of powerful agencies from scrutiny by independent researchers. But this is food for further interdisciplinary research.

[45] Presidential Commission for the Study of Bioethical Issues, *Informed Consent Background,* Bioethics Research Library, Presidential Commission for the Study of Bioethical Issues, (2014) https://bioethicsarchive.georgetown.edu.

Francesca Santulli

# The Concepts of Norm and Disease from Scientific to Popularization Discourse

**Abstract**: The ideological implications of the concepts of norm and disease are particularly evident in the area of mental and behavioral conditions. The conflict between the adoption of a statistical model functional to identifying normal behaviour on a quantitative basis on the one hand, and the uniqueness of each person on the other has emerged in research. The discursive representations of these opposing models is particularly interesting, both in specialized texts and in dissemination. This paper focuses on the area of Disorders of Neurodevelopment, analysing in a discourse analytical perspective the innovations included in the 5th edition of *DSM* (2013) and their implications for the foundation of a new scientific paradigm centered on personal rather than on clinical outcomes. It also examines examples of popularization of knowledge, showing the contrast between the complex and revolutionary scientific debate and the presentation of individual disorders in the context of web-mediated communication.

Keywords: *discourse analysis*, *norm and disease*, *psychiatry*, *web-mediated dissemination*

## 1. Background, Aim and Method

The ideological implications of the concepts of norm and disease are particularly evident in the area of mental and behavioral conditions. Psychiatry itself is considered a hybrid science, rooted in both the natural and social sciences.[1] Differently from surgery (or other branches of medical science), the object of psychiatric inquiry is filtered through a contextual and cultural approach, while natural sciences can only investigate the relationship between the semantic configurations typical of a certain culture and the human body. Psychiatry deals with behaviour, and behaviours can be evaluated only in the light of constructs that define them. In other words, cultural facts rather than natural phenomena are the object of psychiatry.[2]

Under this perspective, the very idea of disease in psychiatry relies on a preliminary assumption, i.e. the possibility of establishing what is typical (normal) behaviour, and how it can be separated from pathologic deviation. Yet norm is not an absolute and everlasting concept, and therefore the very existence of psychiatric diseases and their classification is the result of a cultural choice. Shared diagnostic guidelines stem from the dominating scientific culture and establish what is right and wrong in a certain historical context. Nowadays, diagnostic tools are largely based on statistical notions, namely the principle of normal distribution and the consequent assumption that significant deviance

[1] Ivana Marková and German Berrios "Epistemology of Psychiatry", *Psychopathology*, 45.4 (May 2012), 220-227.
[2] Ciro Ruggerini, Sumire Manzotti and Omar Daolio, "Molteplicità delle aree di conoscenza e 'punti critici' (miti) del dibattito attuale sui DSA", in Ciro Ruggerini et al., eds., *Benessere scolastico negli studenti con DSA* (Trento: Erickson, 2017), 33-54.

from medium value marks the presence of a form of disease. Actually, the bell-shaped model of normal distribution was originally applied to the study of distribution of errors in the measurement of physical quantities, astronomical distances in the first place. Only later was the statistical representation of binomial probability applied to social sciences. In 1835, the Belgian mathematician and astrophysics Adolphe Quételet published an essay, *Sur l'homme et le développement de ses facultés, ou Essai de physique sociale*,[3] presenting a large and original amount of data concerning the development of physical and intellectual human characteristics, aiming to demonstrate that they tend to show a Gaussian distribution. This, according to the author, suggests that it is possible to conceive an actual model of the 'average man', which displays all medium traits, and thus represents all mankind. The new 'social physics' was therefore conceived as the counterpart of astronomical physics, and aimed to discover the laws governing social phenomena and the development of physical and psychological traits of human beings.

The adoption of this model marked an important epistemological turn, as the application of statistical distribution was no longer limited to finding the most correct measure, but was applied to the object of the measurement itself – man in this case. The average is thus assumed to be a real quantity, a natural characteristic of the measured object.[4]

The concept of disease as a deviation from normal behaviour is still at the basis of classifications and diagnostic tools, first and foremost the *International Classification of Diseases* (*ICD*)[5] and, for psychiatry only, the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*). Yet, the most recent version of the latter has promoted for the first time an innovation of this approach, blending quantitative criteria with new dimensional and individual considerations, and thus contributing to a conceptual revolution in mental diagnosis and care.[6] In psychiatry, the ongoing debate on diagnostic criteria and clinical intervention is a symptom of criticism of old categories on the one hand, and, on the other, of the need for new approaches to tackle a large number of problems affecting non-negligible numbers of people.

This epistemological and scientific debate is however scarcely known by the lay public. In contexts of dissemination and popularization, the traditional and consolidated statistical model is still dominant, though usually implicit, and the scope of innovative traits – if mentioned – is not perceivable. The aim of this paper is to investigate how DSM-5 presents some innovations discursively, focusing on the area of Neurodevelopmental Disorders (ND), which is itself an innovation of the last edition of the manual. Attention will then be shifted to popularization, with the analysis of examples of web-mediated communication.

The analysis will be carried out within the theoretical framework of Discourse Analysis (DA). The very concept of discourse, which developed in the wake of Foucault's tradition,[7] at the intersection

[3] Adolphe Quételet, *Sur l'homme et le développement de ses facultés, ou Essai de physique sociale* (Paris: Bachelier, 1835).
[4] See Lennard Davies, *The End of Normal: Identity in a Biocultural Era* (Ann Arbor: University of Michigan Press, 2013); Roberto Medeghini, ed., *Norma e normalità nei Disability Studies* (Trento: Ericson, 2015).
[5] The current version of ICD (ICD-10, 2016) is available at icd.who.int. All websites were last accessed on May 31st, 2019.
[6] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders DSM-5* (Washington: American Psychiatric Publishing, 2013).
[7] Michel Foucault, *L'Archéologie du savoir* (Paris: Gallimard, 1969) ; *L'Ordre du discours* (Paris: Gallimard, 1970).

between language and society, emphasizes the suitability of different disciplinary approaches, each using its methodological instruments to investigate how discourses contribute to promote certain interpretations of facts and shape reality. Typically, the so-called Critical Discourse Analysis (CDA) approach has brought to the forefront ideologically-sensitive areas of social life,[8] while the French tradition has traditionally focused on the constitutive role of discourse as a source of representation and persuasion.[9]

The linguistic and rhetorical aspects of DA play a fundamental role for the analysis of identification, definition, and classification,[10] which are at the core of diagnostic manuals. Definition is itself an argumentative process,[11] and classification is closely linked to defining choices. In proposing definitions, another important aspect is the discursive position of the enunciator, which can range from full averral to attribution, with varying degrees of commitment.[12] Selection of words, modality and syntactic structures are functional to representing – often implicitly – different viewpoints.

In the following sections, I will examine the diagnostic approach of DSM-5, starting from its discursive representation in the initial parts of the manual, and then focusing on the definition and classification of Neurodevelopmental Disorders (§ 2). I will then analyse the texts of Wikipedia entries concerning Autism Spectrum Disorder (ASD) and Specific Learning Disorders (SLD), with a comparison between the English and the Italian versions. I will also consider a choice of texts taken from highly accessed websites (§ 3). In the conclusions, I will highlight the differences between the scientific debate and its popular representation (§ 4).

## 2. Diagnostic Guidelines

Before examining DSM-5, it is worth introducing briefly the wider background in which it operates. The most comprehensive classification of diseases stems from the World Health Organization, and dates back to 1970. It is the well-known *International Classification of Diseases* (ICD), whose 11th version is currently being developed. Its aim is to offer a classification of all pathological conditions, describing both symptoms and aetiology, and to define them on the basis of a coding system. ICD rests on the concept of disease, which is applied both to physical and mental conditions. In 1980 the WHO published an appendix to ICD, which described *Impairments, Disabilities and Handicaps* (ICIDH)

[8] Ruth Wodak and Michael Meyer, eds., *Methods for Critical Discourse Analysis* (London: Sage, 2001); Ruth Wodak and Paul Chilton, eds., *A New Agenda in (Critical) Discourse Analysis* (Amsterdam and Philadelphia: John Benjamins, 2005); Norman Fairclough, *Analyzing Discourse* (London and New York: Routledge, 2003).

[9] Patrick Charaudeau and Dominique Maingueneau, eds., *Dictionnaire d'analyse du discours* (Paris: Le Seuil, 2002); Donella Antelmi, *Comunicazione e analisi del discorso* (Torino: UTET, 2012); Dominique Maingueneau, *Discours et analyse du discours: Une introduction* (Paris: Armand Colin, 2014); Ruth Amossy, *L'Argumentation dans le discours* (Paris: Armand Colin, 2006).

[10] Marc Angenot, "La rhétorique de la qualification et les controverses d'étiquetage", *Argumentation & Analyse du Discours*, 13 (October 2014), aad.revues.org.

[11] Chaïm Perelman and Lucie Olbrechts-Tyteca, *Traité de l'argumentation: La Nouvelle Rhétorique* (Bruxelles: Éditions de l'Université de Bruxelles, 1958).

[12] James Robert Martin, "Beyond Exchange: APPRAISAL Systems in English", in Susan Hunston and Geoff Thompson, eds., *Evaluation in Text* (Oxford: Oxford U.P., 2000).

and, though considering also contextual factors, basically relied on a linear model based on causal links from impairment (physical or psychological deficit), to disability (incapacity due to the impairment), to handicap (social disadvantage resulting from disability). Impairment as well as disability were interpreted as a deviation from normality, in line with assumptions of *la physique sociale* mentioned above. The second version of ICIDH, known with the same acronym but profoundly revised in its contents, was published in 1997. The new manual focused on the actual capacities of individuals and their interaction with contextual factors, which turned out to be crucial for the classification of health conditions themselves. The subtitle of the manual hinted at this new approach: *International Classification of Impairments, Activities and Participation: A manual of dimensions of disablement and functioning.* In 2001 a further version was approved, with a new title, *International Classification of Functioning, Disabilities and Health*, soon adopted by numerous countries and known as ICF worldwide.[13] In ICF the reference to normality is abandoned, the focus shifts to quality of life and to the interaction between personal characteristics and environmental factors that hinder the full development of the person. This is in line with the renewed concept of disability lying at the heart of the *UN Convention on the Rights of Persons with Disabilities*, adopted in 2010.[14] Actually, the interest in disability issues and the development of disability policies have been crucial in spurring the debate on the themes we are discussing here. The relative value of constructs (such as disease or disorder), the importance of the environment, the emphasis on individual characters, are part of psychiatric culture nowadays, and they are also – albeit timidly – represented in DSM-5.

### 2.1 *DSM-5: general approach*

The innovative points of the fifth edition of DSM are listed in the Preface, with a special focus on the organization of chapters and the aim to harmonize DSM classification with ICD codes. Behind the re-arrangement there is however a more general concern. Previous classification led to high numbers of cases of co-morbidity, and often resulted in a not otherwise specified diagnosis. This was due to a general structural fault, namely the adoption of excessively narrow categories. As one of the priorities was that of excluding false-positive, a rigid and narrow categorial structure was adopted, and there was a clear divide between different conditions and between them and health. In case of insurgence of contradictory symptoms recourse was made to the concept of co-morbidity.

The organization of DSM-5 is in this respect significantly innovative, as it singles out clusters of disorders and, though preserving a traditional approach to diagnosis proper, leaves room for different interpretations of symptoms and general facts. The authors of the manual explicitly state their policy, thus recognizing the difficulties posed by the adoption of an innovative ideological approach. In the Introduction, they state:

[13] See Who.int.
[14] See *www.un.org*.

> *Despite* the problem posed by categorical diagnoses, the DSM-5 Task Force recognized that it is *premature* scientifically to propose *alternative* definitions for most disorders. The organizational structure is meant to serve as *a bridge* to new diagnostic approaches *without disrupting* current clinical practice or research.[15]

A concessive structure ('despite') is used to give voice to criticism to previous editions, thus acknowledging the problems of rigid dichotomic categorization. Yet the authors do not take on responsibility for this assumption, but rather admit that time is not ripe for change. The formulation they choose to convey this idea implicitly suggests that scientific research follows a teleological development, which however does not proceed regularly; what turns out to be more correct at a certain moment in time, is not necessarily accepted by the scientific community, and time is often needed for it to be understood, shared, and collectively approved. 'Alternative' options are potentially 'disruptive'. This is in line with Kuhn's view of scientific revolutions.[16] Actually, in psychiatry there are at the moment researchers and clinicians who feel that a 'revolution' is about to occur. Backed by the results of neurobiological research that emphasizes the uniqueness of the human brain not only for its genetic characteristics but also for its acquired neural connections,[17] the insistence on individual characters is leading to a sort of neuro-anthropology, aiming to intertwine different dimensions, in order to give a more realistic view of human existence and of the individual traits of each human being.

The debate on these themes is the leading edge of psychiatric culture today. The DSM-5 manual is half-way between old practice and new epistemological approach. Apparently, it keeps the basic features of a traditional diagnostic tool, based on dichotomic categories; yet it incorporates crucial elements of change, as the presence of clusters paves the way to the disruption of categories themselves and makes the boundaries among categories blurred and uncertain. The dimensional approach, on the other hand, marks the refusal of the Aristotelian concept of category as a homogeneous group, which does not allow a partial or gradual involvement on the part of its members. Innovation is not presented as a revolution, but the message is clear to those who are ready to understand:

> The *more* dimensional DSM-5 approach and organizational structure can facilitate research across diagnostic categories by encouraging broad investigations within the proposed chapters and across adjacent chapters. Such a *reformulation* of research goals should also keep DSM-5 central to the development of dimensional approaches to diagnosis that *will likely supplement or supersede current categorical approaches in coming years*.[18]

[15] DSM-5, 13, emphasis mine.
[16] Thomas Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962).
[17] Emily Finn et al., "Functional Connectome Fingerprinting: Identifying Individuals Using Patterns of Brain Connectivity", *Nature Neuroscience*, 18 (October 2015), 1664-1671.
[18] Ibid., emphasis mine.

As often happens in scientific revolutions, extreme caution is necessary in introducing a new approach, in order to make it more acceptable. The innovation introduced by DSM-5 is described in relative terms, as 'more' dimensional, as if it were a mere question of degree and not a paradigm change. This confirms that the authors do not believe that a total replacement of the traditional approach is possible. They even suggest that the re-arrangement they are proposing is a mere formal question, and choose a low-profile anaphoric encapsulator ('reformulation'). Yet the direction of evolution is clear, as the new seems destined to parallel and eventually replace the old. Change is presented as inevitable and irreversible.

Another important aspect of the new course is the emphasis laid on cultural issues, which are explicitly dealt with in the Introduction. Recognizing that mental disorders are defined in relation to cultural and social norms and values, the manual recommends that diagnostic assessments should carefully consider contextual elements, which were taken into account also in the development of DSM-5. Section III in particular deals with cultural specificity, and includes tools for cultural assessment. It is explicitly recognized that "the boundaries between normality and pathology vary across cultures",[19] with immediate consequences on levels of vulnerability and sufferance on the one hand, and coping strategies on the other. Besides its influence on treatment and clinical outcome, the role attributed to culture implies that it is impossible to give a univocal definition of a disorder, and thus contributes to dismantling the idea of a universal statistical norm, which had led to the ontological recognition of the 'Average Man'.

Yet Section III is not the core of the Manual. It is devoted to "Emerging Measures and Models", a title that emphasizes its marginal position. The bulk of the manual is Section II, which displays diagnostic criteria that are "well-established measures that have undergone extensive review".[20] As for Section III, scientific evidence is considered insufficient to support widespread clinical use. Nevertheless, "these diagnostic aids and criteria are included to highlight the evolution and the direction of scientific advances in these areas and stimulate further research".[21] The idea of teleological development mentioned above is hinted at again. Distinguishing between traditional procedures and innovative tools, the authors confirm the intermediate position of DSM-5, a bridge that should lead from the well-known shores of the past into the promising land of the future.

To sum up, we could say that DSM-5 contains a promise of a 'paradigm shift', which however is for the moment not completely fulfilled.

### 2.2 *The cluster of Neurodevelopmental Disorders (ND)*

In Section II of the manual, which contains the actual diagnostic indications, the new cluster of ND is perhaps the most relevant and interesting innovation. ND include intellectual disabilities, communication disorders, autistic spectrum disorders, attention deficit and hyperactivity disorder,

[19] Ibid., 14.
[20] Ibid., 23.
[21] Ibid, 24.

specific learning disorders, and others. Fundamental criteria for inclusion are the following: genetic or family risk factors, early occurrence, cognitive symptoms corresponding to atypical neurodevelopment, reduced possibilities of remission, frequent co-occurrence of symptoms within the cluster.

The very idea of including in the same group all conditions that occur during development is challenging. Development is different from simple 'growth', as it implies a qualitative increase in complexity, and therefore a goal-oriented stance. The manual does not explicitly discuss the concept of development, nor its ethical implications. Yet in the Section devoted to Use of the Manual, the authors, discussing the capacity of traditional validators to identify close homogeneous groups, affirm a general principle: the criteria used to diagnose are selected because of their "clinical utility for the assessment of clinical course and treatment response of individuals grouped by a given set of diagnostic criteria".[22] In other words, categories are singled out because of their utility rather than their validity. The principle of utility raises further questions, concerning the final aim of the process: Useful for whom? And for what purpose? The importance given to the well-being of the individual all across the manual suggests that, beyond clinical convenience, the concept of utility has to be interpreted in the framework of diagnostic activity and treatment centred on happiness and flourishing of all human beings.

When classifying individual disorders, differences with the previous edition emerge. For example, Autism Spectrum Disorder includes autistic disorder, Asperger's disorder and pervasive developmental disorder of DSM-4. The re-arrangement of categories aims to make them broader and more flexible, as emerges from the description of individual diagnostic indications. Moreover, the emphasis on scales of severity contributes to enhance the dimensional approach discussed above. This in turn brings to the fore individual traits, which have to be considered also from a functional point of view.

Despite all these interesting innovations, a final consideration is due. The manual consistently uses the word 'disorder' and, despite the importance attributed to individual traits, does not suggests that in many cases it would be more correct to talk about 'differences'. A disorder is characterized by symptoms that result in statistically 'ab-normal' behaviour, which in its turn is expression of a form of deficit. Under the perspective adopted by the so-called neurodiversity paradigm, this construct unfairly attributes positive or negative values to different forms of behaviour resulting from different cognitive structures, while each form of human diversity should be equally respected and protected.[23] Neurodivergent behaviour cannot be eliminated, nor should it.

This is actually one of the aporias and, at the same time, challenges of psychiatry: to present in the same manual both disorders and differences, with a consequent confusion between 'cure' and 'care'.[24]

[22] Ibid., 20.
[23] David Grant, "The Psychological Assessment of Neurodiversity", in David Pollak, ed., *Neurodiversity in Higher Education* (Oxford: Wiley-Blackwell, 2012), 33-62; Ciro Ruggerini et al., "Neurodiversità e disturbi specifici di apprendimento", in Enrico Ghidoni et al., eds., *Dislessia in età adulta* (Trento: Erickson, 2012), 92-118.
[24] Ciro Ruggerini et al., eds., *Benessere scolastico negli studenti con DSA* (Trento: Erickson, 2017).

In the light of the debate concerning these aspects of the diagnostic process, the ambiguous half-way position of DSM-5 is confirmed.

The problem emerges with particular evidence in the section devoted to Specific Learning Disorders (SLD). Their diagnostic criteria in DSM-5 include four different aspects:

1) the presence of 'difficulties learning and using academic skills' (difficulties in reading, comprehension, spelling, calculation, etc.);
2) the unexpectedness of the difficulties in relation to age, documented with standardised achievement tests;
3) the possibility for the difficulties to remain unobserved during school-years, to emerge only when the demands exceed the capacities (heavier academic workload, demanding timed tests, etc.);
4) a differential criterion, i.e. the impossibility to account for the difficulties in terms of presence of "intellectual disabilities, uncorrected visual or auditory acuity, other mental or neurological disorders, psychosocial adversity, lack of proficiency in the language of academic instruction, or inadequate educational instruction"[25]

The fourth point justifies the use of the word 'specific' that distinguishes the condition described here. The manual emphasizes the importance of individual learning history, considering also family and educational contexts. SLD have three different manifestations, corresponding to different codes, depending on the compromised ability (reading, written expression, mathematics), and different degrees of severity, which may change during life (the manual invites clinicians to specify 'current' severity).

An interesting terminological point deserves comment. Though classifying 'disorders', the manual describes 'difficulties'. Yet the word 'disorder' is consistently used in the definition and discussion of diagnostic features. This reveals that the classification of SLD is particularly challenging, as the interaction between the neurobiological and the contextual component is a crucial element in the history of the individual, and the implications of boundaries between normality and deviance are here particularly apparent.

## 3. Popularization

The ND axis of DSM-5 comprises eight different disorders. Some of these are not sub-divided, others include a sub-categorization, which may or may not correspond to different nosographic codes. Specifications in diagnosis are always required, either for the severity or for diversified symptoms, or for both. In this Section, I will take into consideration two disorders, Autism Spectrum Disorder (ASD) and Specific Learning Disorder (SLD), which present a limited differentiation. Diagnosis of the former

[25] DSM-5, 66-67.

only requires specifications for severity and co-occurrence of some symptoms or conditions. The latter includes sub-codes specifying the presence of different forms of impairment.

I will refer to the essential elements of the DSM-5 presentation, and then focus on texts meant for the lay public. Within the wide choice of texts generated in the computer-mediated environment, I have chosen to analyze Wikipedia entries, as the web encyclopaedia has become the most popular source of information and reference on scientific and medical topics for millions of people worldwide. The phenomenon is extensively discussed in Garzone,[26] who examines the process of generation of Wikipedia entries and their structure, and presents an interesting comparison with traditional encyclopaedia articles.[27]

Beside the relevant Wikipedia entries (both in English and in Italian), I will discuss a few examples of definitions and classifications present on the Internet. In particular, I will consider the most frequently accessed websites, as they appear from a Google query for 'autism' (European area).

### *3.1 Autism Spectrum Disorders (ASD)*

Within the cluster of the ND, ASD is the third large branch, following Intellectual Disabilities and Communication Disorder. In line with the new course opened up with the 5th edition of DSM, diagnostic criteria include evaluation of severity and co-occurrence with other disorders in the cluster. Symptoms, associated behaviour, onset and evolution are described in detail, with great emphasis on functioning, which highly depends on the severity of the disorder itself and on its combination with other problems (such as, for example, intellectual disability). As mentioned above, the description and discussion contained in Section II of the manual apparently have not changed, but the underlying classification criteria are inherently innovative, first and foremost the choice to unify into the same group disorders that were previously classified separately. This makes it possible to recognize common features, and at the same time leaves room for individual analysis.

This innovative trait is consistently mentioned in popularized descriptions of the disorder, though with limited attention for its consequences. On Wikipedia, ASD is defined as "a range of mental disorders of the neurodevelopmental type. It includes autism and Asperger syndrome".[28] Only after illustration of the main symptoms, its causes and risk factors, the text focuses on DSM-5: "The DSM-5 redefined the autism spectrum disorders to encompass the previous diagnoses of autism, Asperger syndrome, pervasive developmental disorder not otherwise specified (PDD-NOS), and childhood disintegrative disorder". This is a rather technical piece of information, which is given

[26] Giuliana Garzone, *Specialized Communication and Popularization in English* (Roma: Carocci, 2020).

[27] See also, among the studies analysing the discursive implications of Wikipedia texts, William Emigh and Susan Herring, eds., *Collaborative Authoring on the Web: A Genre Analysis of Online Encyclopedias, Proceedings of the Thirty-Eighth Hawai'i International Conference on System Sciences (HICSS-38)* (Los Alamitos: IEEE Press, 2017); Eva Gredel, "Digital Discourse Analysis and Wikipedia: Bridging the Gap between Foucauldian Discourse Analysis and Digital Conversation Analysis", *Journal of Pragmatics*, CXV (2017), 99-114; Susan Herring, *Discourse in Web 2.0: Familiar, Reconfigured, and Emergent*, in Deborah Tannen and Anna M. Tester, eds., *Georgetown University Round Table on Languages and Linguistics 2011: Discourse 2.0. Language and New Media* (Washington: Georgetown U.P., 2013) 1-25.

[28] All quotations from the Autism Spectrum page of Wikipedia are accessible at the following address: https://en.wikipedia.org.

with no comment, so that non-specialized readers may find it difficult to grasp its actual scope. However, a crucial explanation is then given:

> The term "spectrum" can refer to the range of symptoms or their severity, leading *some* to favor a distinction between severely disabled autistics who cannot speak or look after themselves, and higher functioning autistics, such as Temple Grandin, an autism spokesperson.

The concept lying behind the classification (justifying the choice of the word 'spectrum') is here presented in a rather simplified way, focusing on the most evident aspect of variation within the spectrum, namely the level of functioning of individual subjects. Yet the distinction is not introduced as a necessary element of diagnosis, since only 'some' (presumably, clinicians) adopt this approach. Not only does the enunciator assume no responsibility for this statement, but the attribution is also weak, limited to a minority group ('some'). Under this perspective, it is not clear what 'the other' thinks, and what the 'spectrum'-based approach implies, if no distinction is made on the basis of actual symptoms and severity. The mention of Temple Grandin, who may be known to the general public for her books and interviews as well as for her 2010 biopic, is a clear element of popularization, which should make it clear that autism is not necessarily a disabling condition, but can co-exist with expectations of adult independent life. The presence of a reassuring element is not isolated in popular contexts, which are often accessed by people (parents, in the first place) who are puzzled and worried by the 'weird' behaviour of children who may be diagnosed with autism. In other words, in the case of autism – and also of other ND – technical descriptions tend to incorporate elements of 'hope'. There is however no explicit discussion concerning the classification of unusual, minority behaviour as an expression of deficit and therefore as a manifestation of a disease.[29]

The Italian version of the Wikipedia entry is similar to the English, but it differs in some aspects that are relevant for the point discussed here. The second half of the introduction is totally devoted to the differences between the DSM-4 and DSM-5 classifications, with detailed indication of the previous and current arrangement. However, these data are presented in a very technical way and with no comment. Therefore it is extremely difficult for the lay public to understand the reasons for the re-arrangement and its significance. This part is a sort of specialized appendix to the previous paragraph, which spells out:

> data la varietà di sintomatologie e la complessità nel fornirne una definizione clinica coerente e unitaria, è recentemente invalso l'uso di parlare più correttamente di *Disturbi dello Spettro Autistico* (DSA o, in inglese, ASD, *Autistic Spectrum Disorders*), comprendendo tutta una serie di patologie o sindromi aventi come denominatore comune le suddette caratteristiche comportamentali, sebbene a vari gradi o livelli di intensità.[30]

[29] Such a discussion can be found on the Temple Grandin website, where "the problem with Labels" is explicitly dealt with (*www.templegrandin.com*).

[30] "given the variety of symptoms and the difficulties in giving a coherent and comprehensive clinical definition, it has recently become common to talk more correctly about Autism Spectrum Disorder (ADS), which includes a whole series of pathologies

The very accurate information concerning the two editions of DSM is not connected to this general introduction, and for the reader it is difficult to understand that the expression 'Disturbi dello Spettro Autistico' has actually been introduced in DSM-5. This denomination is presented as a (correct) innovation spontaneously emerging from use, and therefore does not have the authoritative status it could derive from the ethos of the DSM Task Force. Moreover, it is described as an umbrella term including 'pathologies and syndromes' that all share the behavioral traits described in the first paragraph, with only quantitative differences. This explanation is rather confusing and inaccurate: on the one hand, the distinction between 'pathology' (disease) and 'syndrome' may be blurred for non-specialized readers, on the other, differences within the group of ASD are limited to level of severity.

Both the English and the Italian version display a certain degree of vagueness when focusing on the adoption of a new 'spectrum' approach, which is limited to 'some' of the subjects involved or presented as the result of spontaneous widespread habits. Both versions – albeit differently – are not accurate in describing the nature of the spectrum approach, nor do they explain its conceptual and practical consequences.

On the top-list websites resulting from a Google query for 'autism', the spectrum approach is always mentioned, though with some differences. The National Institute of Mental Health, in the section of Mental Health Information defines ASD as "a developmental disorder that affects communication and behaviour",[31] and refers to DSM-5 to list its symptoms. It adds: "Autism is known as a 'spectrum' disorder because there is wide variation in the type and severity of symptoms people experience". The definition is simple but correct and the explanation clear, indicating that this website is reliable. This is however an isolated exception.

Autism Speaks starts with the following definition: "Autism, or autism spectrum disorder (ASD), refers to a broad range of conditions characterized by challenges with social skills, repetitive behaviors, speech and nonverbal communication".[32] After incidence estimates, it adds:

> *We know* that there is not one autism but many subtypes, most influenced by a combination of genetic and environmental factors. *Because* autism is a spectrum disorder, each person with autism has a distinct set of strengths and challenges. The ways in which people with autism learn, think and problem-solve can range from highly skilled to severely challenged.

The enunciator is here a collective 'we'. In the context of the whole description, it cannot be interpreted as an addressee-exclusive form, which should refer to experts in the sector. Nor is it actually addressee-inclusive. Rather, it is used as an impersonal form, distributing responsibility of the statement on a non-defined group, and thus suggesting that this is a sort of common opinion. It is

or syndromes having as common denominator the behavioral traits described above, though with different degrees of severity", translation mine. Check https://it.wikipedia.org.

[31] *www.nimh.nih.gov*.

[32] *Www.autismspeaks.org*, emphasis added.

interesting to note that, in the following sentence, the differentiation of traits is presented as a consequence of the spectrum approach, while it is actually the opposite. In a strict interpretation of this causal link, it is the system of classification that influences the variation of symptoms and severity. This is symptomatic of the difficulties in understanding and, above all, communicating the concept of dimensional categorization, which is actually an oxymoron, combining the need for boundaries with the scalar manifestation of reality. As discussed above, this blended approach is at the core of DSM-5, but the role of the American Psychiatric Association is only mentioned in a footnote, with mere reference to the merging of four previous distinct diagnoses into "one umbrella diagnosis of autism spectrum disorder".

One last example: on the MedlinePlus website,[33] ASD is defined as a "neurological and developmental disorder". The emphasis on the neural basis hints at a brain dysfunction that manifests itself during development. The spectrum approach is then introduced: "It is called a 'spectrum' disorder because people with ASD can have a range of symptoms". Here the causal sequence is correct, but the reason for this denomination is reduced to the variety of symptoms, amply described with tones typical of popularization contexts. As in previous examples, the difficulty in disseminating the innovative ideas is evident.

### *3.2 Specific Learning Disorders (SLD)*

The difficulties in the classification of SLD described above (§ 2.2) are echoed in popularization contexts. The English version of Wikipedia reflects the ambiguities in denomination present in DSM-5. A Google query for 'Specific Learning Difficulties' gives no corresponding result in Wikipedia, but shows the entry 'Learning Disabilities', which opens with a definition that includes a terminological question:

> Learning disability, learning disorder or learning difficulty (British English) is a condition in the brain that causes difficulties comprehending or processing information and can be caused by several different factors. Given the 'difficulty learning in a typical manner', this does not exclude the ability to learn in a different manner. Therefore, some people can be more accurately described as having a 'learning difference', thus avoiding any misconception of being disabled with a lack of ability to learn and possible negative stereotyping. In the United Kingdom, the term 'learning disability' generally refers to an intellectual disability, while difficulties such as dyslexia and dyspraxia are usually referred to as 'learning difficulties'.[34]

This definition is not fully coherent and explicit. Besides terminological confusion (which reflects actual difficulties and debate in classification),[35] the neurobiological origin of the condition is indicated as the first element, but then 'several [unspecified] different factors' are mentioned as possible causes.

[33] *Medlineplus.gov*.
[34] See *en.wikipedia.org*.
[35] Julian Elliott and Elena Grigorenko, *The Dyslexia Debate* (Cambridge: Cambridge U.P., 2014).

In the second sentence, a quotation is introduced, but no source is specified. The point raised here is crucial, because it marks the divide between 'typical' and deviating behaviour, and the text suggests that the absence of typical learning abilities does not equal inability to learn, as it could be possible to learn 'in a different manner'. However, this interesting concept (which evokes the interaction between personal characteristics and social barriers fundamental to the new interpretation of disability) is apparently applied only to a part of the interested subjects ('some people'), in a way that reveals a strong prejudice against disability, represented in its traditional negative conceptualization. Thus, a form of dissociation is introduced between the 'good' SLD, involving people who are only 'different' and should not be classified as 'disabled' (an expression that is actually no longer used in official descriptions of disability), and the 'bad' ones, who can be said to have a disorder (and possibly a disability). In the final sentence, a further distinction is introduced, which seems to have a limited, purely terminological scope. The distinction between 'learning disability' on the one hand, and 'dyslexia and dyspraxia' on the other is actually incorrect, as the term 'disability' is widely used in association with reading problems also in the UK, and the expression 'reading disability' is even considered more appropriate by many researchers and clinicians.[36] Confusion is not limited to the initial paragraph quoted above, as shown by the following excerpt:

> Disorder refers to significant learning problems in an academic area. These problems, however, are not enough to warrant an official diagnosis. Learning disability, on the other hand, is an official clinical diagnosis, whereby the individual meets certain criteria, as determined by a professional (psychologist, paediatrician, etc.). The difference is in degree, frequency and intensity of reported symptoms and problems, and thus the two should not be confused.

Here the clinical character of a disorder diagnosis is totally ignored, and the distinction between disorder and disability is therefore based on a misconception. Actually, in the scientific debate around these issues a polynomic-polysemic approach is now spreading, which implies that learning difficulties can be considered 'both' disorders and disabilities, depending on the purpose of the classification.[37]

Furthermore, in the second part of the text, the inappropriate information and the distinction introduced in the first part quoted above are ignored, and disorder and disability are interchangeably used as synonyms.

On Wikipedia, the most popular term 'dyslexia' is also present. Although both DSM-5 and part of the most recent research avoid this denomination, in popular contexts it is still the most common. Wikipedia introduces it as follows: "Dyslexia, also known as reading disorder, is characterized by trouble with reading despite normal intelligence", but then describes it as "the most common learning disability", with no attempt to explain the difference between dyslexia and reading disorder.[38] It is also specified that "some believe that dyslexia should be best considered as a different way of learning,

[36] Ibid., 178.
[37] Ciro Ruggerini et al., "Neurodiversità e disturbi specifici di apprendimento", in Enrico Ghidoni et al., eds., *Dislessia in età adulta* (Trento: Erickson, 2012), 92-118; Michael Rice and Greg Brooks, *Developmental Dyslexia in Adults: A Research Review* (London: National Research and Development Centre for Adult Literacy and Numeracy, 2004).
[38] *En.wikipedia.org*.

with both benefits and downsides". This is in line with the statements concerning learning disabilities we have already examined. The assumption is however presented as a marginal belief ('some believe'), while it is actually the third point of view included in the polynomic-polysemic approach mentioned above.

On the Italian version of Wikipedia, the entry for SLD (in Italian, Disturbi Specifici dell'Apprendimento) can be found, probably because this expression is used in legislation, namely in a 2010 Act (170/2010), which has officially recognized the existence of the problem and thus profoundly changed the approach to it in all educational contexts. As a matter of fact, reference is made to the ICD classification, to DSM-4 (not 5!) and to legislation.[39] On the other hand, the entry for 'dislessia' is translated from the corresponding English version, with few differences, which seem to be basically due to misunderstandings. For example, among the various problems a difficulty in pronouncing words is mentioned ('difficoltà nella pronuncia delle parole'), corresponding to "difficulty in spelling words" in English.[40] The translated text reproduces the source text literally, and therefore the comment on the English version can be extended to the Italian. A further observation: the close word-to-word correspondence extends to the denomination 'learning disability', which is translated as 'disabilità di apprendimento', an expression which is not currently used in Italy, not even in specialized contexts.

All these considerations suggest that the Italian entry has not been conceived independently, but totally relies on the English source, which is evidently considered to be authoritative and reliable. Actually, both the English and the Italian entries contain imprecise or superficial information, use different terms confusingly, and are unable to give a simple but accurate view of the current scientific and diagnostic debate.

## 4. Conclusions

Radical scientific innovations are difficult to grasp and accept, even among the experts. The word 'revolution' is by no means new in the history of science, but in the last few decades the Kuhnian interpretation of the concept has profoundly influenced the epistemological approach, highlighting the cultural and ethical implications of new scientific paradigms, especially in the social sciences.

Psychiatry, being half-way between neurobiological data and cultural constructs, is the branch of medicine that is most sensitive to the consequences of conceptual change. Researchers in psychiatry are currently discussing the emergence of a new paradigm for the recognition, classification and treatment of mental conditions, aiming to go beyond the concept of disease as deviance from normal (typical) behaviour and focus on the individual traits that make each human being different and unique. This is no minor change, and implies a completely new attitude, requiring at the same time new language and discursive representations.

[39] *It.wikipedia.org*.
[40] *It.wikipedia.org*.

It is difficult to consolidate this innovative view, and to make it the reference point for shared systems of classification, protocols for diagnosis and treatment, that have relied on different assumptions for a long time. In this respect, DSM-5 is considered a turning point, as it introduces a change in the approach to diagnosis, integrating well-established habits with new considerations, with emphasis on a dimensional rather than categorial classification. Yet the innovation promoted in the manual is still limited and timid. The analysis of its organization and of some crucial passages has confirmed that it is only a first attempt to modify a long-entrenched tradition. Certainly, this choice may stem from the awareness that a more radical change may have led to disruptive consequences, as clinicians in the first place are often unprepared for this revolution in psychiatry.

If experts find it difficult to accept innovation, the lay public is mostly in the dark, and totally unaware of the potential of new approaches. Taking into consideration some popular sources (Wikipedia, in the first place) dealing with two of the most common ND, it is evident that the existence of a divide between norm and disease (or disorder) is taken for granted, thus implying the existence of minority groups comprising individuals who display characters that differ from the norm. One of the most important aspects of DSM-5 is the introduction of the ND cluster itself, which has interesting implications for the elimination of rigid boundaries among disorders, and between normality and impairment. Yet this innovation – if ever mentioned – is not commented on, so that its meaning and its scope remain unknown to the public. Moreover, concepts like cluster or spectrum are introduced with difficulty, and their potential is mostly ignored.

Popularization is generally reluctant to accept new views, above all when they are more blurred and therefore more difficult to communicate. Traditional schemes are usually preferred, and complex debate ignored. Yet the ethical and social consequences of this resistance to innovation can be enormous, affecting the lives of millions of people worldwide.

Giorgia Riboni

# Representation of Knowledge about Opioid Addiction between Criminalization and Medicalization[1]

**Abstract**: The debate on opioid addiction has become increasingly topical, especially in the United States of America. This study sets out to investigate the representation of opioid abuse in American newspapers with a view to identifying whether it is mainly framed within a criminal-legal or a health-medical paradigm. To this aim, an ad hoc corpus consisting of newspaper articles was collected over a two-year period (Oct 2016-Oct 2018) and analyzed adopting a hybrid methodological toolkit comprising Critical Discourse Analysis as well as Corpus Linguistics. Results indicate that the American newspaper discourse on opioid use primarily adopts a medicalization framework of the issue, which represents people suffering from addiction as 'sick' and therefore not accountable for their condition. Such an approach thus contributes to lifting the stigma from substance users and typically attributes much prominence to the members of the medical community, considered as the legitimate agents of control of the situation. However, the analysis reveals that a medicalization frame, although prevailing in the press, is merging with a legal-criminal one, as police officers and not doctors are portrayed as the legitimate and desirable agents of institutional intervention to tackle the crisis.

Keywords: *medicalization*, *newspaper discourse*, *opioid discourse*

## 1. Introduction

Drug-related emergencies have characterized the last century's history of the United States of America.[2] The country has been repeatedly and arguably unsuccessfully waging wars on drugs[3] while the common perception of the spread and harmfulness of the phenomenon has been heightened during periodic panics over 'epidemics'.[4] Since the 1960s, with the introduction of extended measurement and official statistics to report on psychoactive substance abuse in the U.S., it has been possible to observe that data about the incidence of drug consumption does not always match fluctuations in public alarms. U.S. drug policies thus seem to have been shaped not by actual increases in deaths but rather by intensified fears of 'epidemics'. The latter appear to be fuelled by key social actors such as public officials, the media, and the research community.[5]

At times, even American Presidents have publicly expressed concern, thus drawing their citizens'

[1] This chapter contributes to a national research project on "Knowledge Dissemination across Media in English: Continuity and Change in Discourse Strategies, Ideologies, and Epistemologies" supported by the Italian Ministry of Education (COFIN grant No. 2015TJ8ZAS_002).

[2] Amie L. Nielsen, "Americans' Attitudes toward Drug-Related Issues from 1975-2006: The Roles of Period and Cohort Effects", *Journal of Drug Issues,* 40.2 (2010), 461-493.

[3] David. Courtright, *Dark Paradise: Opiate Addiction in America before 1940* (Cambridge: Harvard U.P., 1982).

[4] Dale D. Chitwood et al., "Reflections on the Meaning of Drug Epidemics", *Journal of Drug Issues*, 39 (2009), 29-39.

[5] Ibid.

attention to the issue.[6] One of such notorious occasions was in 1971, when President Richard B. Nixon declared drug addiction to be 'public enemy number one', as well as 'the most serious threat this nation ever faced'. Much more recently President Donald J. Trump defined the rising numbers of overdose deaths "a national emergency".[7] The types of drug associated with the 'epidemics' evoked by these two presidents, however, are not the same. Scholars have realized that "the attachment of the term 'epidemic' to individual drugs has uniquely linked substances to specific decades".[8] While Nixon was addressing the problems of heroin-related crime and victims, Trump alerted his citizens to the spread of opioid overdose deaths. The opioid 'epidemic' is arguably more virulent than preceding epidemics such as, for example, the ecstasy epidemic in the 1990s and the methamphetamine epidemic in the 2000s.[9] Developed over the last thirty years, the current opioid crisis was first declared an epidemic in 2011. Opioid overdose rates have quadrupled between 2002 and 2013, surpassing overdose deaths from heroin and cocaine[10] and becoming the leading cause of injury death in the U.S. Besides these impressive mortality rates, another factor which has been identified as making the opioid emergency so unlike previous drug-related epidemics is the remarkable impact it has had on the white segment of the population, which had so far been less affected by drug addiction problems than other ethnic groups, especially African Americans and Hispanics. Rampant opioid abuse among white young adults is probably linked to the fact that "prescription opioids are more readily prescribed to White, middle-class, paying patients".[11] In socioeconomic terms, however, the opioid crisis does not appear to be dramatically different from previous drug emergencies: data indicate that the most likely to die from opioid overdoses are still poor, male and living in rural areas.[12] However, media coverage and drug-related policy discourses have given prominence to "rising rates of opioid use and overdose among middle-class, suburban white people, particularly young people".[13]

This has been argued to have produced a shift in the public perception of the 'addict' figure, formerly associated with that of the criminal and now evoking more feelings of sympathy and compassion[14] (the social perception of opiate addiction arguably depends on who is addicted). In the same way, drug policies seem to have been affected: starting from the assumption that those who suffer from opioid addiction are suffering from a disease, policy makers no longer consider punitive treatment as the only option, but they are embracing more moderate, often medicalized ways of

[6] James E. Hawdon, "The Role of Presidential Rhetoric in the Creation of a Moral Panic: Reagan, Bush, and the War on Drugs", *Deviant Behaviour: An Interdisciplinary Journal*, 22.5 (2001), 419-445.
[7] Julie Hirschfeld Davis, "Trump Declares Opioid Crisis a 'Health Emergency' but Requests No Funds", *The New York Times* (October 26th, 2017).
[8] Ivi, 30.
[9] Elizabeth Stone, "Is There 'Hope for Every Addicted American'? The New U.S. War on Drugs", *Social Sciences*, 7.1.3. (2017), *www.mdpi.com*.
[10] Nora D. Volkow et al., "Medication-assisted Therapies: Tackling the Opioid-Overdose Epidemic", *New England Journal of Medicine*, 370 (2014), 2063-2066.
[11] David E. Smith, "Medicalizing the Opioid Epidemic in the U.S. in the Era of Health Care Reform", *Journal of Psychoactive Drugs*, 49 (2017), 95-101.
[12] "Today's Heroin Epidemic: Centers for Disease Control and Prevention", *Center for Disease and Control Prevention* (2015), *www.cdc.gov*.
[13] Stone, "Is There 'Hope for Every Addicted American'?".
[14] Julie Nederland Julie and Helena B. Hansen, "The War on Drugs That Wasn't: Wasted Whiteness, 'Dirty Doctors', and Race in Media Coverage of Prescription Opioid Misuse", *Culture, Medicine and Psychiatry*, 40.4 (2016), 664-686.

tackling the drug issue. This has led some to claim that in the current drug epidemic a medicalization frame has been increasingly replacing the previous criminalization frame of the addiction problem. This slow shift from one framing to the other could be clearly linked to a wider political agenda aimed at privileging the members of certain economic classes (such as the high and middle classes) and ethnic groups (namely, white people), as suggested by those who maintain that a "gentler war on drugs" is being waged under the Trump administration.[15]

In this context, this chapter sets out to investigate the media representation and framing of opioid abuse in the period leading up to and immediately following President Trump's defining the opioid crisis 'a national emergency'.

## 2. Background: Opioid Addiction between Criminalization and Medicalization

In their 1980 seminal work on medicalization, Conrad and Schneider point out that not only is labelling a certain behavior as deviant "a product of a political process of decision making",[16] but also that "decisions concerning what is the proper deviance 'designation' and who is the proper 'agent of control' are political questions decided frequently through political contest".[17] The scholars propose three main frames which have historically been employed with reference to deviance, i.e. deviance as sin (no longer very popular), deviance as crime and deviance as sickness. The latter designation arguably triggers a process of medicalization, allotting medical jurisdiction to phenomena that were previously handled through a non-medical framework.

As regards opioid use, Conrad and Schneider notice that in past times it was not considered much of a problem (opiates being important ingredients in many medicines), so the labelling of opioids consumption as a deviance does indeed represent a political and ideological choice. As regards its framing, they identify a tension between the legal-crime and the medical-sickness paradigms, which has led, over time, to shifting designations and correspondingly shifting drug policies.

When opiate addiction is framed as a criminal, moral failure (e.g. under the Reagan administration which embraced a "Zero Tolerance Policy", ZTP),[18] an abstinence approach is typically advocated for, failing which legal persecution is used as a deterrent. A criminal frame of opioid emergencies promotes a punitive response to drug consumption, foregrounds fears of violent threats – mostly connected to illicit endeavors aimed at getting hold of the drug – and promotes users' isolation through imprisonment. Moreover, when this kind of framing of the issue prevails, the role of medical institutions and doctors is assigned a marginal position and their activities are strictly monitored as lawmakers and public officials are singled out as the rightful agents of control. As noted above, whenever addiction especially concerns disenfranchised groups, the legal-crime paradigm is likely to be dominant.

[15] Kirsten West Savali, "Gentler War on Drugs' for Whites Is a 'Smack' in Black America's Face", *The Root* (August, 11th, 2015), web.archive.org.
[16] Peter Conrad and Joseph W. Schneider, *Deviance and Medicalization: From Badness to Sickness* (St. Louis: Mosby, 1980), 22.
[17] Ivi, 26, emphasis in the original.
[18] Hawdon, "The Role of Presidential Rhetoric in the Creation of a Moral Panic".

Conversely, when opioid misuse mainly involves or appears to involve more powerful segments of the population, then it is usually framed as a medical issue (as, for example, during the Nixon administration and its initial massive adoption of methadone maintenance): "[h]igh prevalence of deviance among the middle class ... increases the likelihood of medicalization and medical sanctions".[19] When the medicalization framework prevails, addiction is decoupled from simple drug use or abuse, with the result that these phenomena are stripped of any social or cultural ties. Under this perspective, disease is perceived as an individualized issue that can be tackled through treatment. Misusers are thus not depicted as responsible for their situation because, unlike in a criminal framing, their condition does not stem from a choice. As a consequence, part of the stigma of addiction is arguably removed and addicted people are possibly less ostracized. Against this backdrop, members of the medical profession can act as "mediators of stigma and marginalization of addicted people".[20] By and large, it may be stated that a medicalization frame of opioid emergencies attributes considerable power to doctors and physicians, medical institutions and pharmaceutical companies. The activities of the former are much less monitored than when a criminal frame predominates, as they are considered as the proper agents of control.

To conclude, recent sociological research[21] seems to suggest that, a few decades after Conrad and Schneider's initial work was published, the representation of opioid is still characterized by a discursive negotiation between the 'opioid addiction as crime' and 'opioid addiction as sickness' frames.

## 3. Materials and Research Design

The purpose of this study is to analyze hegemonic media discourse concerning the opioid crisis by examining the ways in which the latter is represented in newspaper articles with the aim of identifying whether it is the criminal or the medicalization frame that prevails under the first few years of the Trump administration.[22] Newspapers communication was selected as the focus of the investigation since the way in which the media discursively construct drug-related crises is arguably as crucial as the objective conditions of the crises themselves. Not all critical situations are considered deserving of public attention, which means that only those which are deemed 'newsworthy' are actually turned into pieces of news. As a consequence, media representing something as a social issue has important repercussions: not only will the public become more aware of it but this will, in turn, accord it more priority on the political or institutional agendas.[23] Moreover, by underscoring certain aspects of a

[19] Conrad and Schneider, *Deviance and Medicalization: From Badness to Sickness*, 142.

[20] Sonia Mendoza et al., "Shifting Blame: Buprenorphine Prescribers, Addiction Treatment, and Prescription Monitoring in Middle-Class America", *Transcult Psychiatry*, 53.4 (2016), 465-487, 480.

[21] See for example Cindy Brooks Dollar, "Criminalization and Drug 'Wars' or Medicalization and Health 'Epidemics': How Race, Class, and Neoliberal Politics Influence Drug Laws", *Criminal Criminology: Online First Articles* (2018), link.springer.com.

[22] McGinty et al., 2016 carried out a research on U.S. news media framing of opioid abuse in the years 1998-2012 and found out that, in spite of experts' defining the issue a health issue, news media coverage promoted a criminalization framing of it. Emma E. McGinty et al., "Criminal Activity or Treatable Health Condition? News Media Framing of Opioid Analgesic Abuse in the United States, 1998-2012", *Psychiatric Services*, 67.4 (2012), 405-411.

[23] See Maxwell McCombs, "Agenda Setting Function of Mass Media", *Public Relations Review*, 3.4 (1977), 89-95; Maxwell

problematic situation and neglecting others, the media influence the way people and policy makers identify the causes and possible responses to it. Among the various kinds of frames that can affect public attitudes, casual frames have an impact on how society attaches responsibility for and considers the desired solutions to a problem.[24] The way in which the media depict the social groups involved in the emergency – especially those who are attributed the power to provide definitions of the issue and those who are portrayed as being affected by it – also plays a crucial role in orienting public opinion so that certain policies are perceived as more effective than others to tackle the situation.

Owing to the number of actors involved in the opioid epidemic (i.e. government agencies, medical professionals, pharmaceutical companies, public health institutions, and health service researchers), the newspaper portrayal of the opioid crisis is a case in point. Given the complexity of the issue and the multiple ways in which it can be discursively constructed and 'labelled', the selection of a specific type of source identified as authoritative (e.g. politicians, physicians, police officers...) can provide a certain framing and strengthen a particular narrative of the problem.[25] As already mentioned, the medicalization and the criminalization frames have been alternately prevailing in North American political and media communication.

In this context, the analysis aims to identify the most common linguistic and rhetorical tools utilized by journalists in order to represent the opioid emergency as well as discursively construe opioid addiction as a criminal behavior or as a medical condition. Drawing on the notion that discourse is a form of social action which both frames and is framed by social practice,[26] this study adopts a critical discourse-analytical methodological framework. Critical discourse analysis or CDA is typically selected in research that explores the connections between media communication and the ideological presuppositions underlying hegemonic discourse.[27] In the case at hand, CDA may be efficiently used to investigate the way in which newspapers disseminate opioid discourse as this tool will arguably provide a sound description of the power relations and socio-political assumptions guiding journalists' choice of the medicalization or criminalization frames (or of a combination of them). The methodological contribution of Corpus Linguistics (or CL) is also relied upon as it offers a more rigorous outline of the main discursive and linguistic strategies adopted by newspapers when tackling the opioid addiction issue. The support provided by CL applications (such as word frequency lists) to a qualitative approach has been recognized to partly overcome the limitations inherent in the utilization of CDA or CL alone[28] and to activate a 'useful synergy'.[29] This hybrid methodological toolkit is

McCombs and Donald L. Shaw, "The Evolution of Agenda-Setting Research: Twenty-five Years in the Marketplace of Ideas", *Journal of Communication*, 43 (1993), 58-67.

[24] See Shanto Iyengar, "Framing Responsibility for Political Issues: The Case of Poverty", *Political Behaviour,* 12 (1990), 19-40; Shanto Iyengar, "Framing Responsibility for Political Issues", *Annals of the American Academy of Political and Social Science*, 546 (1996), 59-70.

[25] Dietram A. Scheufele, "Framing as a Theory of Media Effects", *Journal of Communication*, 49.1 (1999), 103-122.

[26] Norman Fairclough, *Analysing Discourse: Text Analysis for Social Research* (London: Routledge, 2003).

[27] Norman Fairclough and Ruth Wodak, "Critical Discourse Analysis"; van Dijk Teun, ed., *Discourse as Social Interaction: Discourse Studies. A Multidisciplinary Introduction*, vol. 2 (London: Sage Publications, 1997), 258-284.

[28] Gerlinde Hardt-Mautner, "'*Only Connect': Critical Discourse Analysis and Corpus Linguistics* (University of Lancaster, 1995), ucrel.lancs.ac.uk.

[29] Paul Baker et al., "A Useful Methodological Synergy? Combining Critical Discourse Analysis and Corpus Linguistics to Examine Discourses of the Refugees and Asylum Seekers in the UK Press", *Discourse and Society*, 19.3 (2008), 273-306.

applied in this study to an *ad hoc* corpus consisting of 8,415 newspaper articles (corresponding to 5,825,310 word tokens) including the word 'opioid' in the title and published in the United States of America between October, 1st 2016 and October, 1st 2018. The corpus was collected using the *LexisNexis* database and analyzed with the support of the linguistic software *Wordsmith Tools 7.0*.[30] It comprises texts belonging to a variety of genres (i.e. news stories, editorials, and blogs) and published newspapers with different political affiliations as this is expected to provide a more representative sample of contents offering a more detailed panorama of the North American media opioid discourse.

## 4. The Medicalization of Opioid Addiction

A preliminary quantitative look at the corpus reveals that, although the periods of publication of the articles collected are equally distributed before and after Trump's declaring the opioid crisis 'a public-health emergency', the number of texts published after the US President's speech is higher than that of those published before. This may indicate that newspaper discourse has been affected by Trump's words which have, rather expectedly, attracted media attention to the issue. However, the difference in percentages is not so dramatic (56% vs. 43%). The event of Trump's defining the opioid crisis 'a public-health emergency' is thus to be considered as embedded in a media context which had already been foregrounding the issue, possibly on the basis on its 'negativity' and the large amount of people involved (which corresponds to the 'amplitude' value of Galtung and Ruge's newsworthiness model).[31] However, since the President provides a medicalization framing of the issue (his declaration being a framing act itself), it is possible to hypothesize that this will be the prevailing framing of newspapers as well.

As mentioned above, the automatic interrogation of the corpus can be useful in order to verify this hypothesis. The first step in the analysis is represented by the identification of the most frequently occurring lemmas with the aim of singling out the distinctive features and the most frequently occurring topics of the corpus, so as to obtain a preliminary insight into the newspaper discourse on the opioid crisis. Attribution to semantic domains was operated by checking the lemmas against specialized dictionaries (medical and legal).[32]

As can be observed by Table 1, a significant part (i.e. 18%) of the top hundred words belongs to the semantic domain of health-medicine, thus suggesting that the medicalization framing is indeed the one adopted by U.S. newspapers.

[30] Mike Scott, *WordSmith Tools*, *7.0* (2016), *www.lexically.net*.
[31] Johan Galtung et al.,"The Structure of Foreign News: The Presentation of the Congo, Cuba and Cyprus Crises in Four Foreign Newspapers", Jeremy Tunstall, ed., *Media Sociology: A Reader* (Chicago: University of Illinois Press, 1970), 259-298.
[32] More specifically, the "Medical Dictionary", medical-dictionary.thefreedictionary.com and the "Legal Dictionary" pages of *The Free Dictionary* by Farlex were consulted, https://legal-dictionary.thefreedictionary.com.

| | **Word list** | | | … | … | … |
|---|---|---|---|---|---|---|
| | | | | 65 | *PAIN* | 0,18 |
| **N** | **Word** | **%** | | 66 | CRISIS | 0,17 |
| … | …. | ….. | | 67 | *EPIDEMIC* | 0,17 |
| 11 | SAID | 0,86 | | 68 | WHEN | 0,17 |
| 12 | ON | 0,70 | | 69 | USE | 0,16 |
| 13 | WITH | 0,65 | | 70 | UP | 0,16 |
| 14 | *OPIOID* | 0,63 | | 71 | *HEROIN* | 0,16 |
| …. | …. | … | | 72 | THERE | 0,16 |
| 20 | HE | 0,46 | | 73 | IT'S | 0,16 |
| 21 | *DRUG* | 0,46 | | *74* | *DEATHS* | 0,15 |
| 30 | THEY | 0,34 | | 75 | YOU | 0,15 |
| … | … | … | | … | … | … |
| 32 | WHO | 0,33 | | 79 | *PATIENTS* | 0,15 |
| 33 | WE | 0,33 | | 80 | OUT | 0,14 |
| 34 | NOT | 0,32 | | 81 | THEM | 0,14 |
| 35 | OR | 0,31 | | 82 | *MEDICAL* | 0,14 |
| 36 | PEOPLE | 0,31 | | 83 | AFTER | 0,14 |
| 37 | *HEALTH* | 0,30 | | 84 | WHAT | 0,14 |
| 38 | I | 0,28 | | 85 | *PRESCRIPTION* | 0,14 |
| 39 | ALL | 0,27 | | 86 | THOSE | 0,14 |
| 40 | HIS | 0,26 | | 87 | SO | 0,14 |
| 41 | *ADDICTION* | 0,26 | | 88 | FIRST | 0,13 |
| 42 | THEIR | 0,26 | | 89 | PUBLIC | 0,13 |
| 43 | WILL | 0,25 | | 90 | GET | 0,13 |
| 44 | SHE | 0,25 | | 91 | HELP | 0,13 |
| 45 | STATE | 0,25 | | 92 | YEARS | 0,13 |
| 46 | ABOUT | 0,25 | | 93 | ITS | 0,13 |
| 47 | *OPIOIDS* | 0,24 | | 94 | *ABUSE* | 0,13 |
| 48 | *TREATMENT* | 0,23 | | 95 | PERCENT | 0,13 |
| 49 | CAN | 0,23 | | 96 | *CARE* | 0,13 |
| 50 | NEW | 0,22 | | 97 | LAST | 0,13 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 51 | COUNTY | 0,21 | | 98 | NEWS | 0,12 |
| …. | …. | … | | 99 | LIKE | 0,12 |
| 56 | *OVERDOSE* | 0,20 | | 100 | ACCORDING | 0,12 |
| 57 | *DRUGS* | 0,19 | | | | |

Table 1: Selection of top 100 lemmas (Frequency Wordlist)

On the other hand, within the 100 most often recurring lemmas there are no items exclusively relating to the legal-crime paradigm, and only two ('police' and 'officials') appear within the first 200. It can thus be legitimately inferred that newspapers frame the opioid crisis predominantly as a health-medical issue.[33] However, it is important to stress that 50% of the words belonging to the medical domain and ranking in the first 100 positions can also be found in the specialized legal dictionary, which may suggest that an overlapping of the two paradigms is taking place. This hypothesis is explored in paragraph 6, whereas the remainder of this one is devoted to the analysis of the items belonging to health-medical domain.

Rather predictably, the most often recurring lemma of this semantic domain is 'opioid', which is used in the news articles both as the head of noun phrases as well as a pre-modifier.[34] The top five clusters in which this term appears on the left ('opioid crisis', 'opioid epidemic', 'opioid addiction', 'opioid overdose', 'opioid abuse') also suggest that the main approach to the problem is medical.[35] Percentage frequencies indicate the American press defines the opioid issue as an addiction issue and not, for example, a pain issue (opioid medications being prescribed as a remedy for chronic pain).[36]

As already pointed out, drug addiction has been repeatedly criminalized in the course of the numerous 'wars of drugs' the U.S. has waged over the last decades. However, this does not seem to be the case with newspaper coverage of the initial period of the Trump administration: the top clusters containing 'addiction' as a pre-modifier seem to suggest that American journalists establish an equation between being addicted and being sick.

The link between addiction and illness can also be observed in the concordance lines of 'addiction is', 27% of which represent intensive relational processes[37] attributing the quality of being sick to the status of being addicted.

[33] It is to be noted that the domains of 'public emergency' and 'institutions' are also to be found at the top of the frequency wordlist, but they are not as extended as the health/medical one.
[34] It is worth mentioning that, in spite of its possible relevance in the legal-criminal framing, the lemma 'opioid' only appears in the Medical Dictionary (and is not to be found in the Legal one).
[35] It is to be noted that a pre-modifier establishes a link between the word itself and the item it pre-modifies which is both strong and difficult to challenge as the two are processed as a single whole.
[36] 'Pain' also ranks among the collocates, but with a limited frequency of occurrence.
[37] Michael A. K. Halliday, *An Introduction to Functional Grammar* (London: Edward Arnold, 1985).

| | Concordance Cluster List | | |
|---|---|---|---|
| **N** | **Cluster** | **Freq.** | **MI score**[38] |
| 2 | ADDICTION TREATMENT | 1190 | 5,72 |
| 6 | ADDICTION CRISIS | 296 | 4,47 |
| 10 | ADDICTION MEDICINE | 194 | 5,29 |
| 11 | ADDICTION RECOVERY | 182 | 5,54 |
| 12 | ADDICTION SERVICES | 179 | 4,94 |
| 13 | ADDICTION EPIDEMIC | 166 | 3,77 |
| 35 | ADDICTION SPECIALIST | 76 | 6,40 |
| 36 | ADDICTION PROBLEM | 74 | 4,10 |
| 37 | ADDICTION ISSUES | 70 | 19,18 |
| 38 | ADDICTION PREVENTION | 61 | 3,97 |
| 39 | ADDICTION EXPERTS | 61 | 17,31 |

Table 2: Top clusters containing 'addiction' as a pre-modifier (Concordance)

More specifically, addiction is equated to chronic illness and to a kind of mental illness, as indicated by the following examples:

1. Baker said she wants people to understand drug *addiction is a disease* that can grip anyone at anytime. It grabbed hold of her only child and destroyed her. (*Star-News*, 13/1/2017)
2. "Treatment needs to be a much higher priority because *addiction is an illness of the mind.* Opioids change your brain chemistry. So we have to understand that for people to overcome their addiction they have to be treated as patients." (*North Carolina Lawyers Weekly*, 6/1/2017)
3. *Addiction is a complex illness*, with biological and psychological components. Medication pacifies the addicted brain's receptors that produce cravings and rewards, while psychosocial rehabilitation helps the wounded, traumatized individual manage his or her depression and illness. Together, they produce the best outcome. (*Arizona Capitol Times,* 19/10/2017) [emphasis mine]

What emerges from these examples is that the adoption of a medicalization frame to the opioid addiction generates a narrative that drastically reduces accountability. In the last two excerpts, the text producers (North Carolina Attorney General Josh Stein whose words are quoted in (2) and Dr. Saul Perea, the integrated care medical director of non-profit organization Terros Health who wrote the opinion piece (3) is drawn from) heavily rely on scientific data to persuade their audience of the passive status of people with an opioid addiction: the latter simply fall ill through no fault of their own. This is even more evident in example (1), where addiction performs the function of Actor in two material processes ('it grabbed hold', 'it destroyed') whereas the addicted girl only occupies the role of the Goal of the clause.

[38] The MI score provides the Mutual Information score, i.e. the value of a statistical measure between the search term and the collocate. This value assesses the strength of the link between the search term and the collocate, so it is displayed in the Collocate List of the Wordsmith Tools software. However, in order to provide more visual clarity, in this study the MI score information is displayed besides the frequency information.

The list of the main transitive verbs collocating with 'opioid addiction' ('treat', 'fight', 'combat', 'curb', 'prevent') contains items that largely belong to war and fight metaphors, so they naturally belong to the 'war on drugs' discourse. However, the most often recurring collocation is 'treat', which indicates that North American newspapers represent medical treatment as the primary way of handling addiction. It is also to be stressed that war and fight metaphors are also largely used in the health/medicine domain with reference to illness management and cure, which may further attest to the adoption of a medicalization frame in the newspaper coverage of the opioid crisis:

4. Georgia this week received $29.3 million *to treat opioid addiction*, intended to fund medication-assisted treatments as well as mental health services combined with substance use treatment. (*The Atlanta Journal-Constitution,* 22/9/2018)
5. FDA Commissioner Scott Gottlieb proposed Wednesday an expansion of long-term (and perhaps even lifetime) access to drugs that *treat opioid addiction*, such as methadone or buprenorphine. (*The Washington Post,* 27/10/2017)
6. The centerpiece of Gov. Larry Hogan's new plan *to combat opioid addiction* and Maryland's epidemic of overdoses is a recognition that treatment for those who are incarcerated is one of the crucial missing links in the state's efforts. (*The Baltimore Sun,* 5/2/2018)
7. The Brown Medical Association held a panel to discuss how to better train doctors and medical professionals to *prevent opioid addiction* and treat those suffering from the epidemic Thursday night at the Alpert Medical School. (*The Brown Daily Herald: Brown University,* 9/2/2018).[emphasis mine]

These excerpts arguably reinforce the notion that, if addiction is a manifestation of an underlying sickness, its origins are individual and not societal, and therefore not really worth investigating. In fact, the most frequently occurring transitive verbs collocating with 'opioid addiction' all seem to focus on the effects of addiction rather than on its causes, thus suggesting that the U.S. press is almost exclusively concerned with the possible strategies to deal with the emergency. In discursive terms, spotlighting the consequences of addiction rather than what may produce it makes it difficult for the reading public to pinpoint the responsibilities for the causes. In other words, there is hardly any reference to those who may be held responsible for the situation. On the contrary, as examples (4)-(7) demonstrate, groups and institutions responsible for tackling the effects of opioid addiction are mentioned in the newspapers (cf. footnote (5)) and are represented as elaborating strategies to tackle it, even though the main action performed in the corpus (as suggested by the significant occurrence of the lexical verb 'to say'; see Table 1) is talking and discussing the issue.

## 5. The Voices of Experts

Both the close reading and the data extracted from the word frequency lists of the newspaper articles collected for the study seem to indicate that the preferred discourse mode adopted by American journalists when writing about the opioid problem is that of the reported event where reported speech

(specifically statements and reactions) is attributed more space and importance than reported facts.[39] Verbal processes therefore dominate the coverage of the crisis. Specifically, the verb 'to say' represents the first content word in the frequency wordlist and even has a higher incidence in the corpus than the term 'opioid'. The most often recurring clusters where it appears (e.g. 'in a statement', 'in an interview', 'a news release', 'a news conference' etc.) reveal that many of the news stories report on public declarations provided during formal speech events.

Those whose words are broadcast belong to a variety of categories: they may be politicians, attorneys, doctors, academicians, police officers, people suffering from addiction (or people related to them), spokespeople of pharmaceutical or health insurance companies and so on and so forth:

8. A *Marine Corps veteran*, Leinenkugel said that while media coverage focuses on the VA's shortcomings, Wisconsin's Congressional leadership on veterans issues" are the high point" in the country. (*Wisconsin State Journal,* 24/11/2017)
9. "The programs that frighten people, that shock, that intimidate -those do not work," said Janet Welsh, *an assistant professor at Penn State, who runs the Prevention Center in the College of Health and Human Development*. (*Pittsburgh Post Gazette*, 1/4/2018)
10. "We are resilient, we are proud, and we are hardworking," says William Ihlenfeld, *former US attorney for the Northern District of West Virginia***.** (*The Washington Post,* 22/5/2017).
11. Sen. Ben Watson*, a Savannah Republican and internal medicine doctor*, voted against the bill. He said he supported the desire to deal with opioid misuse. (*The Atlanta Journal-Constitution,* 11/2/2017) [emphasis mine]

Example (11) was selected as representative of journalists' widespread tendency to selected interviewees belonging to overlapping categories. In the corpus considered in this study, it was frequently observed that those whose words are reported simultaneously wear different 'hats'. It is to be noted that these experts are almost always represented as single individuals rather than as a class (what van Leeuwen calls 'singular specification').[40] Typically, the Sayer is identified by name, surname, title, and professional qualification, thus suggesting journalists' possible wish to single out and cite specific authorities and not to refer to their collective professional group. However, professional qualification plays a meaningful role, as:

> [p]rofessional characteristics (position, place of work, academic degree, profession, membership of a political party) are based on power as authority and prestige and portray the speaker as a person competent in the questions discussed. Professional characteristics possess a much bigger argumentative value than personal ones, and are used much more frequently [in the press].[41]

The high occurrence of names and titles followed by a *verbum dicendi* is combined in the newspaper articles with the colligation 'he said/says': the referents of the third person pronoun are

[39] Patrick Charaudeau, *Le Discours d'information médiatique: La construction du miroir social* (Paris: Nathan, 1997), 168.
[40] Theun Van Leeuwen, "The Representation of Social Actors", Carmen-Rosa Caldas-Coulthard and Malcolm Coulthard, eds., *Texts and Practice* (London: Routledge, 1996), 32-70, 46.
[41] Alla V. Smirnova, "Reported Speech as an Element of Argumentative Newspaper Discourse", *Discourse & Communication*, 3.1 (2009), 79-103, 86.

extremely varied (with a slight, unsurprising preference for the President) which reinforces the idea that a multitude of experts coming from heterogeneous backgrounds are mentioned in the text. This contributes to making the text what Moirand defines a 'plurilogal intertext' (multi-voiced intertext)[42] consisting of the opinions of different speech communities called upon by the author. It is possible to hypothesize that the complexity of the opioid issue as well as its political, legal, and social implications leave newspaper journalists in a state of *insecurité discursive* (discursive insecurity)[43] which they try to compensate by incorporating the numerous voices involved in the situation in their texts. This allows them to dramatize the conflict[44] and to explain the social stakes of the issue: their role seems to slip "towards that of the 'mobiliser'",[45] more in keeping with newspaper opioid discourse which sees different speech communities (political, legal, medical etc.) as both vital contributors and preferred audiences.

Although a medicalization framing of the opioid issue prevails in the newspaper articles, the sources identified as authoritative in the text belong to diverse professional and power groups: whereas one might expect the reported words of the members of the medical community to be given prominence in the articles, the results of this analysis do not corroborate this hypothesis. Consequently, the presence of such heterogeneous expert voices may be a sign that the health-medical and the criminal-legal frameworks are not to be intended as mutually exclusive; although in the American press coverage of the opioid crisis the medicalization framework arguably prevails, it may be possible to hypothesise a merger between the latter and the criminalization framework. Such a hypothesis had already emerged as a result of the analysis of the most frequent lemmas of the corpus. The attribution of the latter to the semantic domains of medicine and crime suggests that the two paradigms may be possibly overlapping (cf. §4). An investigation of the discursive representation of the main social and professional groups involved in the opioid issue may thus be helpful in order to verify whether this is the case.

## 6. Addicted People, Doctors, and Police

By and large, animated subjects are not at the top of the frequency wordlist (Table 1), with the result that it is not easy to identify who is considered responsible for the current situation. Single citizens (referred to as 'people' and, rather significantly, as 'patients') are normally represented as passive subjects or victims. In the press coverage of the opioid crisis, 'people' mainly collocates with figures indicating huge quantities and expressions belonging to the semantic domain of addiction and death. In other words, when journalists write about people, they typically provide statistical data on the number of citizens involved in the addiction issue and on the many deaths provoked by opioid overdose.

[42] Sophie Moirand, "Communication and Cognitive Dimensions of Discourse on Science in the French Media", *Discourse Studies,* 5.2 (2003), 175-206, 179.
[43] Ivi, 197.
[44] Helena Calsamiglia and Carmen Lopez Ferrero, "Role and Position of Scientific Voices: Reported Speech in the Media", *Discourse Studies,* 5.2 (2003), 147-173, 169.
[45] Moirand, "Communication and Cognitive Dimensions of Discourse on Science in the French Media", 197.

| | **Concordance Cluster List** | |
|---|---|---|
| **N** | **Cluster** | **Freq.** |
| 1 | PEOPLE WHO ARE | 471 |
| 2 | PEOPLE IN THE | 389 |
| 3 | PEOPLE WHO HAVE | 316 |
| 4 | PEOPLE DIED FROM | 241 |
| 5 | PEOPLE DIED OF | 230 |
| 6 | PEOPLE ARE DYING | 115 |
| 7 | PEOPLE ADDICTED TO | 108 |
| 8 | PEOPLE WHO DIED | 102 |
| 9 | PEOPLE WHO USE | 99 |
| 10 | PEOPLE HAVE DIED | 97 |
| 11 | PEOPLE IN RECOVERY | 91 |
| 12 | PEOPLE DIED IN | 83 |
| 13 | PEOPLE WHO NEED | 80 |
| 14 | PEOPLE SUFFERING FROM | 79 |
| 15 | PEOPLE WHO WERE | 73 |
| 16 | PEOPLE WITH OPIOID | 68 |
| 17 | PEOPLE A DAY | 67 |
| 18 | PEOPLE STRUGGLING WITH | 65 |

Table 3: Top clusters containing 'people' as search word (Concordance)

The first category to be attributed action is that of doctors, who, however, are not mentioned by journalists very frequently ('doctors' only appears in the 126th position of the Frequency Wordlist). This is a rather unexpected result, especially in light of the fact that medicalization frames usually attribute significant importance to the medical profession. The analysis of the contexts where this lemma occurs may provide insight into why that is the case. First, it is important to point out that 'doctors' is often used in combination with lexical verbs such as 'to (over)prescribe' and similar ones, thus suggesting that doctors' prescription practices may be partially responsible for opioid abuse:

12. It also proposed making naloxone, the antidote for opioid overdoses, more widely available, along with a requirement that *doctors prescribe* it when they order the use of high-risk opioids (*The Washington Post,* 26/10/2017).
13. The legislation also mandates that doctors double-check state databases for patients at risk, and the state will check for *doctors who oversubscribe* (*Salt Lake Tribune,* 16/03/2018).
14. For years, the opioid crisis was described as one of negligence. In this narrative, *doctors overprescribed* pills that shouldn't have gone to patients and pharmaceutical companies overzealously promoted medications while playing down the risks (*Salt Lake Tribune,* 19/2/2017).[emphasis mine].

As emerges from the examples above, doctors' prescription behaviors are represented as strictly associated with the outbreak of the epidemics and finding ways to regulate them is essential in order to

tackle the addiction issue. This hypothesis is further corroborated by the frequent use of deontic modals to refer to what doctors should, must, need to do, etc.:

15. *Doctors need to* change the way they treat underlying issues like mental health and pain, but legislating restrictions on prescribing opioids is not necessarily the right answer, Cleveland said, and could negatively impact those with real pain management needs. (*Dayton Daily News (Ohio),* 18/02/2018)
16. When opioids are used, he said, *doctors should* prescribe the lowest effective dose for the shortest amount of time. (*The Atlanta Journal-Constitution,* 7/12/2017). [emphasis mine]

It therefore seems possible to state that doctors are the most frequently mentioned professional category in the newspapers and the one who is attributed a certain degree of action, but their freedom is portrayed as problematic. Interestingly, the term 'doctors' does not always appear alone but it is often to be found in the collocation 'doctors and + other (professional) group' (12% of occurrences). 'Doctors and patients' is the most statistically significant of such collocations; when doctors and patients are linked together, they are typically discursively constructed as the victims of the misleading practices of pharmaceutical companies, whose references in the articles examined have significantly low occurrences:

17. The study will also fuel concerns that the ***opioid marketing*** misled *doctors and patients* on risks and benefits. (*Star Tribune,* 8/3/2018)
18. ***Pharmaceutical companies*** have denied allegations of *misleading doctors and patients* and said they want to help address the crisis. (*St. Paul Pioneer Press,* 26/4/2018)
19. Lawmakers, law enforcement and other leaders across the state have accused ***drug manufacturers*** of *misleading doctors and patients* about the safety of using opioids to treat acute and ongoing pain. (*St. Paul Pioneer Press,* 26/4/2018). [emphasis mine]

To sum up, the figure of the doctor is given an ambivalent status in the U.S. press coverage of the opioid crisis: on the one hand (and rather paradoxically), this kind of professionals are depicted as actively contributing to the spread of the epidemics. On the other, when they are grouped with their patients, they are portrayed as blameless preys of the marketing strategies of drug manufacturers, whose interests are obviously at stake but who are rarely mentioned in the articles.

The other professional group to be attributed action in the corpus is that of police officers. Significantly, the word 'police' has the same frequency percentage of "doctors" (although a slightly lower raw occurrence). Differently from the latter category, however, the discursive representation of the police is not as controversial. As the following examples indicate, the police is considered as the legitimate and desirable agent of institutional intervention to tackle the crisis:

20. *Police arrested* suspected key players in drug operations and dealers who could be traced to drugs that caused overdose deaths (*Tribune Review* 31/12/2017)
21. Easton *police arrested* an alleged dealer and four others during a Feb. 21 sting, while Bethlehem *police raided* a South Side home Feb. 15 where a suspect set up an elaborate surveillance system to warn him if police approached. (*The Morning Call*, 20/5/2018)

22. In August 2016, though, Hampton *police arrested* him for careless driving while using unprescribed Xanax. He tried rehab, but on the following New Year's Day, his family found him dead on his bedroom floor, from an overdose of heroin and fentanyl. (*Pittsburgh Post-Gazette* 25/3/2018)[emphasis mine].

This possibly suggests that, in spite of mainly adopting a medicalization framing for the opioid issue, American journalists still establish a strong link between drug abuse and criminal activities. Whereas in a medicalization framing of the addiction issue one would expect doctors to be represented as agents of control and identified as possible solvers of the problem, what happens in the press coverage of the opioid epidemic instead is that the police is deemed responsible for tackling with the emergency, as suggested by the contexts of the expression 'law enforcement':

23. Two Northland *law enforcement* coalitions are joining forces to combat opioid sales and other serious crimes across the region (*Duluth News-Tribune (Minnesota),* 17/2/2017)
24. Maryland has been fighting this rise in drug addiction for years, and coordinated efforts between state and federal *law enforcement* agencies continue to limit the importation of these drugs into our state. (*Washington Post*, 26/2/2017)

However, it is to be noted that police officers are not only depicted as dealing with crime, but very often they are portrayed as performing activities similar to those a doctor would perform:

25. All St. Louis city police officers to begin carrying drug that can stop overdose deaths. (headline; *Saint Louis Post-Dispatch (Missouri),* 4/8/2017).
26. The nation's opioid epidemic is changing the way law enforcement does its job, with police officers acting as drug counselors and medical workers and shifting from law-and-order tactics to approaches more akin to social work**.** (*Dayton Daily News (Ohio),* 19/3/2017)
27. A police officer administered two units of Narcan before the Bismarck Fire Department and Metro Area Ambulance arrived, administering a third dose of Narcan which revived the man, who reportedly admitted to using heroin. (*The Bismarck Tribune,* 7/11/2017)

As a consequence, it is possible to affirm that both the role of doctors and that of the police may be undergoing a process of discursive redefinition: whereas doctors typically represent a key figure in a health-medical frame, in the articles selected for this analysis they are mainly inscribed in a legal framework and possibly, to some extent, even criminalized. At the same time, police officers seem to be assigned tasks dealing with both the potential criminal activities of people suffering from addiction as well as with their health.

These results seem to confirm the hypothesis that the medicalization and criminalization paradigm are not irreconcilable, but are currently merging in the words of American journalists.

## 7. Discussion and Conclusion

The results of this study seem to partially diverge from preceding ones such as McGinty et al. 2016 which ascertained the prevalence of the legal-criminal framing in the American newspaper coverage of

the opioid crisis. This analysis has been carried out on more recent texts and arguably demonstrates that over the last couple of years newspaper discourse on opioid abuse has mainly shifted from a criminal framing to a medicalization one.[46] This may be due to a number of reasons: first, it may be the product of an ever increasing demand for the press to use a language which does not attach stigma to substance users[47] and which *de facto* steers towards the health-medical paradigm.

In addition, criticism has been levied against the government for conducting a 'gentler' war on drugs when it comes to opioid abuse due to the fact that the epidemic seems to mainly affect white and middle-class people.[48] Whereas this has as yet to be verified, the preference for medicalization framing over the criminal one could be linked to the wider political agenda: political powers' adoption of a medical framework combined with media's reproduction of the latter may exert the effect of attributing less responsibility to drug users and lifting part of the stigma which is typically attached to them; if a health-medical approach is taken, people suffering from addiction are seen as 'sick' and therefore not accountable for their condition.

However, whereas medicalization may prevail over criminalization in the American press, the analysis has possibly revealed that these two apparently contradictory paradigms are indeed reconciled and seem to be merging in the coverage of the opioid epidemic. This merger may be caused by the fact that, especially in certain American states, the treatment and the punishment systems are intertwined. Moreover, some scholars argue that medicalization and criminalization coexist as the former is habitually adopted in relation to white and middle-class people whereas disenfranchised groups are typically criminalized.[49]

Another possible, additional reason may have to do with the fact that the shifting from a criminal framing to a medicalization framing is still ongoing in the press and in the public perception at large.

The merging of the medicalization and criminalization framing seems particularly apparent in the discursive representation of doctors and police officers. Doctors may be expected to be depicted as the main agents of control within a health-medical approach to the opioid issue, but the analysis has shown that this is not the case. Moreover, they are often described within a legal framework rather than a medical one. As mentioned above, their prescribing practices are often portrayed as potentially connected with the causes of the epidemics and should be monitored and legally restricted. On the other hand, the police, which typically play a crucial role in a criminal framing, are attributed responsibility and legitimacy in dealing with the opioid issue, which is therefore represented as to be solved through medical and coercive police measures at the same time. To further blur the divide between criminalization and medicalization, police officers are often depicted as performing tasks aimed to restore the health or, in extreme cases, even to keep drug abusers alive, thus appearing more similar to doctors.

[46] Seklir et al., conducted a more narrow-scope study on the Northern California newspaper coverage of the opioid epidemics and obtained similar results (Lilian Seklir et al., "The Opioid Epidemic in the News: Findings from an Analysis of Northern California Coverage", *Berkeley Media Studies Group* (2016), *www.phi.org/resource*.

[47] Alexandra B. Collins et al., "Harnessing the Language of Overdose Prevention to Advance Evidence-based Responses to the Opioid Crisis", *International Journal of Drug Policy*, 55 (2018), 77-79.

[48] Cindy Brooks Dollar, "Criminalization and Drug 'Wars' or Medicalization and Health 'Epidemics'".

[49] Rebecca Tiger, "Race, Class, and the Framing of Drug Epidemics", *Contexts*, 16.4 (2017), 46-51, 50.

The analysis of the future press coverage of the opioid epidemic may be useful to reveal whether the merging of the criminal and the medical paradigms is something which will characterize opioid discourse for a long time or whether the current combination of these two approaches this study has arguably identified is only a temporary sign of a shift on framing. It is hoped that future newspaper articles on the topic will place an emphasis not only on the possible ways of tackling the effects of widespread opioid addiction or the professional categories involved in such an enterprise, but possibly also on the causes of such a problem which, at the moment, do not appear to be properly investigated.

Dermot Heaney

# Taking a Stance on Doping. Online Press Evaluation of a Parliamentary Select Committee's Investigations into Doping in British Cycling[1]

**Abstract**: Between 2016 and 2017, the Parliamentary Select Digital, Culture, Media and Sport Committee was charged by the House of Commons to investigate doping in British sport, following revelations in the press that this practice was widespread. This study focuses on the witness sessions involving exponents of cycling, a sport frequently linked with performance enhancement.

The study adopts a Computer-Assisted Discourse Studies (CADS) approach. By comparing a corpus of the Committee hearings with a corpus of online media coverage, the study offers a detailed qualitative analysis of stance and evaluation strategies in both corpora. Analysis highlights the importance of stance adverbials for witnesses and Committee members alike. It also reveals patterns of attitude adverbials. It is shown how patterns of stance in the hearing prime the press account of the issue, resulting in predominantly negative evaluations that reduce the complexity of the issue to an oversimplified more polarized account, presumably in the interests of newsworthiness.

Keywords: *cycling*, *doping*, *evaluation*, *keyword*, *media coverage*, *Parliamentary Select Committee*, *stance*

## 1. Introduction

Main scholarly investigation into doping in sports abounds in a variety of disciplines spanning the hard sciences, sociology, the history of sport and philosophy of sport, to name the most obvious. By contrast, while various aspects of sport in general have inspired important linguistic studies, the topic of doping has not been fertile ground for linguists. A similar pattern prevails in studies of the press coverage of sport, which has been extensively analysed from various perspectives across a numerous disciplines, though linguists, with notable exceptions,[2] have not been drawn regularly to examine the print media discourse on this issue.

The present study considers online media coverage of a Parliamentary Select Committee's

[1] This chapter contributes to a national research project on "Knowledge Dissemination across Media in English: Continuity and Change in Discourse Strategies, Ideologies, and Epistemologies" supported by the Italian Ministry of Education (COFIN grant No. 2015TJ8ZAS_002).

[2] See, for example, Henk Erik Meier et. al., "Spirals of Signification? A Corpus Linguistic Analysis of the German Doping Discourse", *Communication and Sport*, 5:3 (2015), 352-373; Scott Jedlicka, "The Normative Discourse of Anti-doping Policy", *International Journal of Sport Policy and Politics*, 6:3 (2014), 429-442; Tarja Laine, "Shame on Us: Shame, National Identity and the Finnish Doping Scandal", *The International Journal of the History of Sport*, 23:1 (2006), 67-81.

investigation into combating doping in British Sport.[3] Specifically, it analyses those sessions dedicated to the sport of cycling, in which doping practices are so well and sensationally documented as to have jeopardised the very credibility of the entire sport.[4] Primarily, the analysis is concerned with the formal linguistic transformations that occur when some key procedures of an oral, institutional discourse are relayed in the print media. However, given that this issue is a bioethical one, that admits of different interpretations and stances as to what even constitutes performance enhancement for athletes and other stakeholders (governments, governing bodies, politicians, doctors, coaches, sports fans, sponsors, to name the most obvious), it also considers the print media's contribution to public understanding of this issue, of its complexity and different interpretations. Further, as the Committee's understanding of the issue is based on the testimony of witnesses, many of them high profile figures from various spheres within the world of cycling, it is also appropriate to consider how their reputations are affected by their appearance at a hearing and subsequently by their depiction in the media. Thus, media reporting on investigations into a bioethical issue also, inevitably, invites reflections on the ethics of how that information is conveyed and considerations as to whether the popular press is entirely fit for purpose on such a contested issue.

### 1.1 *Background*

The world of professional cycling is governed by strict anti-doping rules, although it not completely sure that these regulations are administered and policied in entirely effective or totally ethical ways. To appreciate the investigation of the Parliamentary Select Digital, Culture, Media and Sport Committee on Combatting Doping in Sport and the press coverage it received some familiarity with the regulated substances and the basic medical and scientific view of their use may be helpful.

For the immediate background to the present study, one need go no further than the fourth and final report of the parliamentary Digital, Culture Media and Sport Committee Combatting Doping in Sport,[5] specifically the second section, which is concerned with unethical performance enhancement within British professional cycling as represented by Team Sky, under the management of Sir Dave Brailsford:

> In September 2016, the Russian-based cyber espionage group, Fancy Bear, published documents obtained by hacking into WADA (World Anti-drug Agency) computer systems, which showed how a number of athletes had been granted. Therapeutic Use Exemptions (TUEs), which permitted

[3] See *Media and Sport Committee Oral Evidence: Combatting Doping in Sport*, House of Commons, 146 (2016, 2017a, 2017b), *www.parliament.uk*.
[4] See David Millar, *Racing through the Dark* (London: Orion, 2011); David Walsh, *Seven Deadly Sins* (New York: Astria Books, 2012); Juliet Macur, *Cycle of Lies: The Fall of Lance Armstrong* (New York: Harper Collins, 2014); William Fotheringham, "What Crisis-ridden Team Sky Must Do to Restore their Shredded Credibility", *The Guardian* (2018), *www.theguardian.com*; Martha Kelner, "Remarkable Drugs Report Shatters Team Sky's Illusion of Integrity", *The Guardian* (2018), *www.theguardian.com*.
[5] House of Commons, *4th Report: Combatting Doping in Sport* (2018), 19, *www.parliament.uk*.

> them to take medicines to treat long-term conditions like asthma or pollen allergies. These exemptions were required because the drugs that were requested to be administered were banned within periods of competition in the absence of TUEs ... As a result of the Fancy Bear hack, there was particular scrutiny of three TUE's granted to British cyclist, Sir Bradley Wiggins, before the 2011 and the 2012 Tour de France and the 2013 Giro d'Italia, for the use of the powerful corticosteroid, triamcinolone, to treat his asthma.

The revelations of Fancy Bear subsequently drew the attention of the British press, notably of the Daily Mail journalist Matt Lawton,[6] who in October 2016 revealed that The UK Anti-drug Agency (UKAD) had begun investigations into the delivery of a mystery package to the Team Sky Bus to treat Sky cyclist Bradley Wiggins. Both TUEs and the delivery of the package were subject to intense investigation when members of the team Sky management, medical and coaching staff were called before the Committee as witnesses.

1.3 *TUEs*

If TUEs are permissible under WADA rules, some explanation is required to understand the medical and scientific reasons why it can be considered controversial and unethical for team doctors to prescribe them. The glossary to the enquiry describes their conditions of use as follows:

> [f]or a national governing body to approve a TUE, there are strict rules: that the athlete would suffer significant problems without taking the substance; that it would not be significantly performance enhancing; that there is no reasonable therapeutic alternative; and the need to use it is not due to prior use without a TUE.[7]

However, the system is open to abuse. Some medicines, when not used to treat a genuine condition, can deliver performance enhancement, which is why they appear on the WADA banned substances list.[8] This is particularly true of a group of drugs used widely in professional cycling to treat asthma or allergy problems. According to medical and anecdotal evidence from athletes, corticosteroids like triamcinolone, for example, aid weight loss with no reduction in muscle power, which delivers a considerable advantage in races.[9] Thus, there is considerable temptation for athletes (and conniving doctors) to bend the rules for granting TUEs in order to gain an unfair advantage. The Fancy Bear leaks showed that Team Sky rider Bradley Wiggins had applied for TUEs before his previous three Grand Tour appearances, also in the run-up to the 2012 Tour de France, which he won. Medical evidence quoted in the Parliamentary Committee's closing report indicates triamcinolone "continues to have a positive effect for

[6] Matt Lawton, "UK Anti-doping Called for Ban of Drugs at Centre of Current Storm that Has Engulfed Team Sky and British Cycling", *Daily Mail* (2016), *www.dailymail.co.uk*.
[7] House of Commons, *4th Report: Combatting Doping in Sport* (2018), 22.
[8] WADA, *Prohibited List*, *WADA* (2019), *www.wada-ama.org*.
[9] See House of Commons, *4th Report: Combatting Doping in Sport* (2018), 19-22.

people who have taken the drug for two or three weeks after it has been administered",[10] ushering in the suspicion that "the assessment of medical need has been based too closely on trying to achieve peak level of physical condition in the athlete, rather than returning them to a normal state of health".[11]

1.4 *Delivery of the package*

The aspect of Team Sky's anti-doping transparency that attracted most attention from the press was the delivery of a package from British Cycling's Manchester medical stores, for which no credible explanation or record was available or, indeed, has so far been provided. Speculation about Team Sky's clean credentials was further fuelled by Matt Lawton's[12] revelation of possible rule bending by Team Sky and Bradley Wiggins at the close of the 2011 Criterium du Dauphiné. Held in June, this is an important lead-up race to the Tour de France, which starts in early July. According to an anonymous source within Team Sky, at the end of the race in La Toussuire, Dr Richard Freeman, the team doctor, took delivery from Simon Cope of a 'mystery package', the contents of which were then allegedly administered to the cyclist, even though no TUE had been granted; the implication being that this was meant to secure longer-term enhancement for the imminent Tour de France; besides the fact that, if the package contained triamcinolone, Wiggins was in breach of the rules by injecting it on the last day of a race, an offence punishable by a two-year suspension. The fact that no records were available either at Team Sky or at British Cycling, from where the package originated, only served to swell the clouds of doubt hanging over Brailsford's team. His tardy claim that the package contained nothing more sinister than an over-the-counter mucolytic widely available in continental pharmacies did nothing to dispel those suspicions.

1.5 *Select committees*

House of Commons select committees are bipartisan, and their members are elected by fellow MPs. Their basic remit is to ensure that the House of Commons can better scrutinise the Government and hold it to account. These bodies "have the power to compel witnesses to attend, demand written evidence and even charge witnesses with contempt. Witnesses also have no right to silence".[13] However, it has been observed that committees increasingly go beyond scrutiny of the executive, "holding the wider world to account" and indulging in "hostile grilling of people who hold no governmental role".[14] The tendency to investigate issues outside the conduct of the executive has increased public interest in their work, because they intervene

[10] Ibid., 22.
[11] Ibid., 31.
[12] Lawton, "UK Anti-doping Called for Ban of Drugs".
[13] Adam Lent, "Select Committees Are Becoming the Ugly Face of Parliament: It's Time to Rein Them in", *The London School of Economics and Political Science* (2013), blogs.lse.ac.uk.
[14] Ibid.

in areas of life more likely to attract public and, by extension, media attention; not least because they often involve well-known or powerful figures who, because of their fame or notoriety, or because they belong to unpopular categories, are of more general interest than the workings of the executive. Suffice it to remember the appearance of media magnate Rupert Murdoch before the select committee on phone hacking of celebrities by his journalists,[15] or the Director General of the BBC, who had to answer questions about the decision not to broadcast a documentary on a BBC celebrity suspected of sexual abuse of minors.

The MP Tony Wright observes that "the external media attention that the house gets comes far more from the Select Committee system than from anywhere else";[16] so much so that "the media visibility of the Commons' select committees has grown substantially, giving them unprecedented national (even global) attention".[17] Indeed, research indicates "there has been a substantial growth in overall mentions of commons committees".[18] The Culture, Media and Sport Select Committee is one "whose prominence has grown greatly",[19] particularly as a result of the media behaviour scandal mentioned above.

As Kubala notes, "coverage of committees has clearly increased since the late 1980s, which starkly contradicts the evidence of a decline in political and other types of parliamentary coverage (specifically of the Chamber) during the same period".[20] This is unsurprising, as the broader scope of committees means that they are more likely to meet several news value criteria such as continuity, because issues remain in the media spotlight for the duration of the committee's work (which can extend over years); famous and powerful people (including high ranking ministers and high-profile, outspoken, 'colourful' chairs of the committees themselves); unusual situations and consequences, to name but a few.[21] Press exposure is also facilitated by the communication strategy of the commons' media and information service to attract journalist to evidence sessions in particular, for instance through live webcasting of evidence sessions, which means that journalists no longer have to attend Parliament for a story; Parliament now brings the story to them.[22]

Of the various aspects of committee procedures, the evidence sessions have emerged as the most newsworthy. As Kubala notes, this "also suggests that the media increasingly consider select committees to be of news value when performing their function of publicly scrutinising, and holding to account, the Government and others – whilst their other main function of proposing policy change, via their reports, has perhaps diminished in importance".[23] Moreover,

[15] House of Commons, *Unauthorised Tapping into or Hacking of Mobile Communications* (2010-2012), *www.parliament.uk*.
[16] Cit. in Patrick Dunleavy and Dominic Muir, "Parliament Bounces back: How Select Committees Have Become a Power in the Land", *Democratic Audit* (2013), *www.democraticaudit.com*.
[17] Ibid.
[18] Ibid.
[19] Ibid.
[20] Marek Kubala, "Select Committees in the House of Commons and the Media", *Parliamentary Affairs*, 64.4 (2011), 694-713.
[21] Ibid., 706.
[22] Ibid., 710.
[23] Ibid.

the privileges, rights and conditions obtaining in evidence sessions inevitably have a bearing on the newsworthiness of these mediated events and the press's own liability in reporting them. While witnesses have no right to silence[24] – or legal representation – committee members are protected by parliamentary privilege and can, substantially, state or imply whatever they want with very few constraints and without fearing the libel laws.[25] As a result, committees "are increasingly characterised by an extremely aggressive style of questioning, becoming 'public courts' where individuals are tried on the strength of their performance rather than on the evidence".[26] This inevitably adds to their news appeal. Committee members can interrupt their witnesses and prevent them from providing evidence, or otherwise browbeat them. When they use their privilege to brand a witness "a tax cheat or an idiot",[27] is it any surprise they often become the darlings of the press?

> [T]he Parliamentary Papers Act 1840 provides that the reporting of Parliamentary Committee Reports is always protected by absolute privilege unless the publication is not bona fide ('without intention to deceive') i.e. is malicious. This statutory immunity allows publishers to report material discussed in Parliament or Parliamentary Reports without threat of libel proceedings, insofar as those reports are *bona fide*.

It is not difficult to appreciate how advantageous this situation is to both committees and the press. The former's privileges and practices potentially increase the likelihood of newsworthy proceedings and thus greater publicity and further justification of their work; the latter enjoys virtually unimpeded access to news, while its privileged position in the information chain is safeguarded in ways that would be unlikely in, say, a court of law. Indeed, it has been observed that select committees run the risk of becoming trials in which witnesses may quickly become defendants without, however, access to proper procedure or protections (Lent, 2013; BBC, 2015).[28]

This close and mutually beneficial relation between the institution and the press cannot be overlooked when assessing the print media's role in relaying information about this or any other aspect of bioethics; all the more so, considering that the way in which witnesses are questioned and their words reported raises ethical issues, too, entailing questions of independence, objectivity and accountability. It is hoped the following linguistic analysis helps gauge to what extent these standards are respected in the press's account of this affair.

## 2. Data

[24] Lent, "Select Committees Are Becoming the Ugly Face of Parliament".
[25] *A Point of View: Do Parliament's Select Committees Wield Too Much Power?*, BBC (2015), *www.bbc.com*.

[26] Lent, "Select Committees Are Becoming the Ugly Face of Parliament".
[27] *A Point of View: Do Parliament's Select Committees Wield Too Much Power?*, BBC (2015).
[28] Ibid.; Lent, "Select Committees Are Becoming the Ugly Face of Parliament".

To examine how this issue was investigated by the committee and subsequently reported in the online print media, two corpora have been constructed. The first, the Committee Corpus (COC), is comprised of transcripts of three hearings at the Parliamentary Select Committee on Culture, Media Sports looking into doping in British cycling. The transcripts of the three sessions were downloaded from the UK Parliament site in pdf format and then converted into txt so they could be run on the concordancing software Antconc. The resulting corpus amounted to 57,432 tokens. The corpus is made up of the testimonies of the following witnesses: Robert Howden, Chairman of British Cycling, George Gilbert, Head of the Technical and Ethics commission of British Cycling, Shane Sutton, a coach from British Cycling, David Brailsford, Head of Team Sky, Simon Cope from British Cycling, Nicole Sapstead, Head of UKAD, Britain's antidrug Agency; Nicole Cooke, British Cycling medal winner.

The second, the Online Media Corpus (OMEC), was generated by the Lexis Nexis data bank (supplemented by data from the Pocket Hit service) in response to the search words 'Team Sky', 'jiffy bag', 'Brailsford', 'British Cycling', 'whistleblower', 'parliamentary select committee', 'TUE', and 'doping'. The resulting corpus is composed of articles in the British online print media for the period 2016-2017, the years in which members of British Cycling and Team Sky were called to testify during the committee's witness sessions. The articles comprising the corpus are drawn from across the spectrum of principle online dailies, from *The Sun* and *The Mirror* to *The Daily Mail*, *The Daily Express*, to the so-called qualities (*The Times*, *The Observer*, *The Telegraph*, *The Guardian*, and *The Independent*). The sample also includes reports published from the sports section of the BBC site, as well as articles from regional newspapers like *The Scotsman*, *The Glasgow Herald*, *The Belfast Telegraph*, and a selection from *The Irish Times* and *The Irish Independent*, the main newspapers in the Irish Republic. This provided a corpus of 214, 629 tokens which, while not exhaustive, is highly representative, particularly given the media's tendency to replicate news.

Closer analysis of the data reveals that all mainline press formats are represented. However, the quality press accounts for 44% of the sample, *The Times* and *The Telegraph* alone providing 35% of that segment. The middle-market *Daily Mail* and *The Express* account for 26% of the sample, while the two principal tabloids, *The Sun* and *The Mirror* comprise just 5.3% of the data. Regional journalism and other outlets like the BBC make up the remaining 22.3% of the sample. The highest proportion of data originates from broadsheets, and it is conceivable that these papers are more interested in the complexities of the committee's procedures than tabloids, which traditionally have a narrower focus on sports performance and results. *The Daily Mail*, alone provides 24.2% of the total data. As one of the paper's journalist, Matt Lawson, was the first to break the news of possible abuse of TUEs, such a percentage of total coverage over the period is hardly surprising.

## 3. Method: Corpus Assisted Discourse Approach

The attempt to trace the changes that occur in transition from committee room to the front page is carried out by combining elements of corpus linguistics with the techniques of close and qualitative discourse analysis. Partington[29] terms this approach corpus-assisted discourse studies (CADS) and among its advantages includes "the uncovering, in the discourse type under study, of what we might call non-obvious meaning, that is meaning, which might not be readily available to the naked-eye perusal".[30]

The use of corpus technology, like the concordancing software Antconc used in this study, to investigate a corpus has a number of advantages, summed up by Partington et. al. as follows:

> corpus technology helps find other examples of a phenomenon one has already noticed. At the other extreme, it reveals patterns of use previously unthought of. In between it can reinforce, refute or revise a reviewer's intuition and show them why and by how much their suspicions were grounded.[31]

The Antconc concordance software features a number of tools for interrogating a corpus. The following have been used in the present study: concordances, which show patterns of significant lexical co-occurrence, i.e., that is the tendency of certain words to repeatedly appear together with other words; key words, which compares one corpus with another reference corpus in order to discover which words have a significantly higher frequency of occurrence in one corpus compared with another. This tool shows words that are "outstandingly frequent in terms of a reference corpus"[32] and provides indications concerning the "aboutness"[33] of a corpus, or "what the text 'boils down to' ... once we have steamed off the verbiage, the adornment, the blah, blah, blah".[34]

As the data comprises two corpora, each one served as a control corpus for the other and the information from the keyword feature was the principal tool used for analysis, which was then further fleshed out by using the concordance tool. Although there has been a scholarly debate about the optimal size and type of reference corpora, an orthodox position has not yet emerged. Some, like McEnery et al.,[35] even maintain that the size of a reference corpus is relatively

[29] Alan Partington, "Metaphor, Motifs and Similes across Discourse Types: Corpus Assisted Discourse Studies (CADS) at Work", in Anatol Stefanowitsch and Stefan Gries, eds., *Corpus-based Approaches to Metaphor and Metonymy* (New York: De Gruyter Mouton, 2006), 267-304.
[30] Alan Partington et. al., *Patterns and Meanings in Discourse: Theory and Practice in Corpus-assisted Discourse Studies* (Amsterdam and Philadelphia: John Benjamins, 2013), 11.
[31] Alan Partington, *The Linguistics of Political Argument: The Spin-doctor and the Wolfpack at the White House* (London and New York: Routledge, 2003), 12.
[32] Mike Scott and Christopher Tribble, *Textual Patterns: Key Words and Corpus Analysis in Language Education* (Amsterdam and Philadelphia: John Benjamins, 2006), 59.
[33] Ibid., 58.
[34] Ibid., 56.
[35] Tony McEnery et al., *Corpus-based Language Studies: An Advanced Resource Book* (Routledge: London, 2006), 308-311.

unimportant, while Scott[36] goes so far as to say that even an absurdly incongruous reference corpus will provide useful information on the defining content of the node corpus. Scott also indicates that genre is an alternative criteria for the selection of a reference corpus and will provide a different range of key words than a reference corpus chosen on the grounds of size. With these observations in mind, the present study uses each of these data sets as reciprocal control corpora despite their difference in size and genre.

It may be objected that the length of the two data sets (see next section) does not really warrant the use of concordance software and that it would have been possible to reach similar conclusions using a standard qualitative analysis. However, it would have been very laborious (and less reliable) to calculate the statistical keyness of a sample of terms in each corpus being compared with its counterpart. That factor alone, justifies the choice. Moreover, the concordance software tools ensure that the analyst does not overlook or underestimate the importance of certain function words or core lexis that can seem opaque and go unappreciated in a traditional unassisted qualitative appraisal, whereas the software often reveals significant patterns and occurrences at this level of the language.

### 3.1 *Method: CADS approach*

Partington and Zuccato[37] draw attention to the fact that the CADS approach leads the analyst to results and conclusions by working bottom up through the textual evidence thrown up by the corpus technology. The significant data produced by the concordance software (such as the keyword tool) can feature function words or core vocabulary that may, at first sight and in the isolation of single texts appear to offer neither particularly significant nor interesting meanings, whereas cumulatively and quantitatively they do so and as a consequence warrant closer qualitative examination. This was the case with the corpora under investigation here. For example, the keyword tool of the concordancing software indicated that 'stance' markers, particularly adverbials, were in strong evidence and one of the distinctive linguistic features of the COC.

### 3.2 *Analytical framework*

Having identified the prominence of stance and its importance to participants in the COC, the analysis set out to verify what, if any, changes are made to these evaluation markers in the transfer to the OMEC. In this study the kinds of appraisal found in the two corpora are viewed slightly differently and defined using different though related terms. Although the terms

[36] Mike Scott, "In Search of a Bad Reference Corpus", in Dawn Archer, ed., *What's in Word-list? Investigating Word Frequency and Keyword Extraction* (Oxford: Ashgate, 2009).

[37] Alan Partington and Matilde Zuccato, "Brexit before and after: A Corpus-assisted Study of the Referendum Campaigns and the Immediate Aftermath", *Textus English Studies in Italy*, 1 (2018), 119-139.

'stance' and 'evaluation' are very close in meaning, they seem to imply slightly different interpretations of assessment. Partington and Zuccato[38] refer to Hunston and Thompson,[39] Hunston[40] and Biber et. al.[41] as seminal studies in evaluation. However, Hunston predominantly uses the term 'evaluation' and view it as a basically binary "indication that something is good or bad"[42] while Biber et. al. prefer the term 'stance', which seems to indicate a more nuanced function by which "speakers express personal feelings, attitudes, value judgements, or assessments".[43] As Biber et. al. have drawn attention to the prominence and variety of stance markers in oral interactions, this is the term that has been used for analysis of the COC, as has the taxonomy of adverbial stance they provide. "Evaluation", with its more binary good versus bad polarity, has been used for the OMEC, largely because of the simplification that appears to occur in the conversion of the Committee's procedures into news stories. Moreover, the very titles of studies by a scholar like Hunston associate this term with 'text', rather than with oral discourse.[44] Additionally, the analysis of evaluative patterns in the OMEC will also involve reference to the way in which certain conventional lexis of newspaper reporting is implicitly evaluative and can be defined in terms of evaluative or semantic prosody to refer to lexical items that may look neutral when taken in isolation,[45] but for which "the community of speakers has acquired ... shared primed knowledge by repeatedly encountering an item in co-occurrence with other items of a certain polarity".[46]

## 4. Analysis and Findings: (COC)

The keyness results for COC reflect the institutional oral nature of the discourse type. Names of committee members who question witnesses (not foregrounded in press coverage) are prominent, as is lexis that refers to institutional roles, e.g., 'chair' (8 in order of keyness, with a frequency of 210). The formal nature of the hearing explains the high keyness of words reflecting the generally polite register: 'thank' (32, 48); 'would', widely used in indirect speech acts to ensure a courteous and respectful tone, as is 'welcome' (173, 11). 'Respect' (391, 18) occurs in the collocation 'with all due respect' alternatively it refers back to a previously mentioned topic. A very high proportion of high-ranking, key words reflect the dialogic, question–answer, structure of the interaction. Their prominence is related to their frequent use

[38] Ibid., 64.
[39] Susan Hunston and Geoff Thompson, eds., *Evaluation in Text* (Oxford: O U.P., 2000).
[40] Susan Hunston, *Corpus Approaches to Evaluation: Phraseology and Evaluative Language* (London: Routledge, 2010).
[41] Douglas Biber et. al., *Longman Grammar of Spoken and Written English* (Harlow: Pearson Education Limited, 1999).
[42] Susan Hunston, "Counting the Uncountable: Problems of Identifying Evaluation in a Text and in a Corpus", in Alan Partington et al., eds., *Corpora and Discourse* (Bern: Peter Lang, 2004), 157-188, 157.
[43] Biber et. al., *Longman Grammar of Spoken and Written English*, 996.
[44] Hunston and Geoff Thompson, eds., *Evaluation in Text*; Hunston, "Counting the Uncountable: Problems of Identifying Evaluation in a Text and in a Corpus".
[45] Partington and Zuccato, "Brexit Before and After"; John Sinclair, "The Nature of the Evidence", in John Sinclair, ed., *Looking Up* (London: Collins, 1987), 150-159.
[46] Ibid., 60.

in the formulation of questions, as is the case with: 'are' (16, 474); 'do' (19, 263); 'did' (47, 227); 'what' (54, 227); 'does' (162, 53); 'how' (189, 85). Additionally, first person (singular and plural) and second person referring words: 'my (51, 156) '; 'us' (44, 99); 'your' (8, 210), frequent in face-to-face interactions, are also in evidence, while 'correct' (60, 26), for example, is used in questions and affirmative one-word answers, as is 'agree' (92, 16), used in questions by the committee and answers by the witnesses. Other key words refer to the participants in the hearing: 'we' (9, 639), very often referring to the committee itself, as well as to the other bodies or teams the witnesses represent. The recapping function is key in utterances like 'as we have said', in which the committee summarizes evidence. Similarly, 'this' (61, 324) is used widely as an anaphoric reference to keep the object of questions well in mind. 'Talking' (91, 24), as in 'we are/ are not talking about' is used to define more exactly the object under discussion. Frequently 'going' (102, 89) is used by committee members to announce an imminent speech act or their desire to return to a previous point for better understanding, as in 'going back to'. 'Earlier' (186, 25) is used exclusively by the committee to refer to what has been said previously and collocates frequently with 'mentioned' (402, 11). 'Today' (370, 33) also refers to the hearing. 'Ask' (75, 82) is very frequent in utterances such as 'I am going to ask'; 'what I would like to ask', with which the committee member commentates on procedure; 'happy' (224, 23) expresses the willingness of witnesses to comply with the demands of the committee and conveys a collaborative spirit (downplayed in the press account). 'Sorry' (289, 11) is also used to apologise for interruptions or failures on the part of witnesses to remember properly.

### 4.1 *Stance adverbials*

Of particular interest is the keyness of adverbs, particularly stance adverbials, which "convey speakers' comments on what they are saying (the content of the message) or how they are saying it (the style)".[47] They fall into three categories: epistemic (speakers' judgements about the certainty, reliability and limitations of a proposition), attitude (speakers' value judgments about a proposition's content) and style (the speaker's manner of speaking).[48] Stance adverbials are particularly concentrated in keyness rankings 100-199. Closer observation reveals that they are an important resource both for the committee and for witnesses, indicating both parties' differing degrees of conviction and uncertainty, commitment and non-commitment to propositions in the course of the investigation. The following table provides an overview of their deployment by both witnesses (W) and committee members (C) during Committee Witness Sessions (CWS) 1 (Howden, Gilbert, Brailsford, Sutton), 2 (Cope, Sapstead) and 3 (Cooke) that constitute the corpus of the enquiry.

| | | CWS1 | | CWS2 | | CWS3 | |
|---|---|---|---|---|---|---|---|
| RAN | STANCE ADVERBIALS | W | C | W | C | W | C |

[47] Biber et al., *Longman Grammar of Spoken and Written English*, 764.
[48] Ibid., 855.

| K | | | | | | | |
|---|---|---|---|---|---|---|---|
| 36 | Obviously (attitude) | 22 | 8 | 5 | 13 | 2 | 2 |
| 82 | Really | 16 | 8 | 15 | 3 | 2 | 1 |
| 95 | Clearly (attitude) | 15 | 4 | 6 | 8 | | |
| 100 | Presumably (doubt/ certainty) | 7 | 4 | 0 | 5 | | |
| 119 | [of] course (doubt /certainty) | 8 | 3 | 2 | 3 | 1 | 0 |
| 123 | Basically (style of an utterance) | 3 | 0 | 5 | 0 | 1 | 0 |
| 125 | Necessarily (doubt /certainty) | 7 | 3 | | | 0 | 1 |
| 133 | Fairly (imprecision) | 1 | 4 | 1 | 1 | 1 | 0 |
| 161 | Certainly (doubt/ certainty) | 17 | 3 | 5 | 6 | 8 | 1 |
| 199 | Probably (doubt /uncertainty) | 6 | 2 | 8 | 9 | 1 | 2 |
| 217 | Potentially (doubt/ uncertainty) | 11 | 0 | 11 | 2 | 1 | 1 |
| 353 | Routinely (limitation) | 2 | 0 | 1 | 0 | 0 | 0 |
| 392 | Definitely (certainty/doubt) | 0 | 0 | 0 | 0 | 9 | 1 |

Table1: Keyness of stance adverbials in the COC

To fully appreciate the distribution and use of stance adverbials across the three sessions, some observations about the kind of witnesses are useful. CWS 1 involves two high-ranking officials in British Cycling, the head of Team Sky, Sir David Brailsford, a national sporting hero for many, and its head coach, Shane Sutton, CWS 2 involves Simon Cope, the senior coach who delivered the suspect package to the team SKY Bus and Nicole Sapstead, the head of UKAD. In CWS3 Nicole Cooke, a cycling champion, is the sole witness.

The table shows that a consistently higher number of stance adverbials is used by witnesses in CWS1. In CWS2 that ratio is much closer, indeed it is the Committee who use them with greater frequency than either witness; while in CWS 3, Nicole Cooke makes more frequent use of them. This may be of significance if we consider the profile of the witnesses and also their alignment to the agenda of the Committee. All the witnesses in CWS1 enjoy a high status within their sport and they use stance adverbials much more widely than the committee. Simon Cope is a relatively low-profile member of the Sky organisation, the unfortunate messenger boy who delivered the package, and in his case it is the committee's stance that prevails, while Nicole Sapstead is the head of the UK's antidrug agency and the Committee is sympathetic to her view. Nicole Cooke, a national sporting icon, on the other hand, expresses stance more frequently than the committee, who are also sympathetic to her view.

'Certainly' is an obvious candidate for further investigation, because it is used by all witnesses in all three sessions and because it occurs in the particularly relevant range of key rankings. It occurs with noticeable frequency in the testimonies of witnesses in CWS1 in statements like:

(1) Howden: "but we are certainly not aware of any doping products that would be in there"
(2) Howden: "We would certainly welcome more testing at an amateur level"
(3) Brailsford: "Certainly, I think that is a very good point

(4) Brailsford: "Certainly we would welcome transparency around it"
(5) Brailsford: "We try to avoid the use of Tramadol. Certainly, when there is no medical need there is no appropriate, legitimate reason to use Tramadol
(6) Brailsford: "Certainly, in a stage race, an issue might arise with a particular rider early in a stage race, so you have to get medical equipment out to them"

The overall attitude conveyed in such examples (countered by only three such stance adverbials from the committee) is one of conviction concerning a proposition and also signaling agreement with questions and observations from the committee itself.

In CWS2, all six witness uses are attributable to Sapstead, the head of UKAD, who is very critical of SKY, as in the following examples:

(7) Sapstead: "There was certainly no record of what was put in this package"
(8) Sapstead: "Certainly in relation to the record keeping of other doctors, yes, this unusual
(9) Sapstead: "Yes at the time they certainly would not have known anything about the package in relation to our investigation"

In this session, not only is the ratio of use much closer, its use by the committee reflects that it is particularly convinced by Sapstead, so much so, that it shares her stance:

(10) Chair: "They certainly clearly show that this is the case. The overall picture you paint is extremely alarming"
(11) Chair: "It would certainly seem that records like that were not kept"
(12) Chair: "It would certainly seem that Dr Freedman is not complying with GMC's guidelines on that"

Another critic of Team Sky, Nicole Cooke in CWS3, makes 8 uses of the adverb, prevalently to express conviction in her negative attitudes towards doping governance, as in the following examples:

(13) "It certainly reduces the amount of doping that riders can do"
(14) "I can only go off my own experiences and Shane certainly wasn't suitable for the role of senior British coach for British cycling"

The only use of this adverbial by the committee actually concerns the place of women in the world of cycling.

Although no formal distinction is made between the witnesses, it seems clear that some (Howden, Gilbert, Brailsford, Sutton, Cope) are appearing in their own defence while others would seem closer to 'witnesses for the prosecution', in that they are critical of the former, and the committee basically aligns itself with their evaluation and makes this explicit through its

own use of evaluation. For their part, the former use stance adverbials to emphasise the self-evident truth of their testimony, to convey conviction, to underline the validity of a point, to stress sincerity and veracity but also agreement, and to set limits to negative interpretations, and to minimize culpability, or the extent of the issue under investigation. The witnesses for 'the prosecution' (Sapstead, Cooke), on the other hand, preponderantly express certainty in their negative judgements about the former. The Committee's own stance becomes dominant in the session with the Simon Cope, the weakest 'defence' witness and more symmetrical in the presence of the two 'prosecution' witnesses, Sapstead and Cooke.

As will be seen in the next section, although witnesses in CWS1 use the adverb 'certainly' by far the most, and in a far greater proportion to the committee (a pattern that is repeated in all but one of the key stance adverbials), it is the evaluations achieved through 'certainly' in CWS2 and CWS3 that appear to prevail in online media coverage of the issue.

### 4.2 *Representation of stance in press coverage*

As Biber et. al. note: "[n]ews has the lowest frequency of stance adverbials", while conversation "contains by far the highest frequency".[49] Even though a committee hearing is not strictly speaking a conversation, it is concerned with one of conversation's main characteristics, namely, conveying "subjective information" which, it is reasonable to assume, accounts for the high presence of stance adverbials. We would not, therefore, expect to encounter many such adverbials in the media accounts and, indeed, the OMEC keyword list indicates just sixteen key adverbials, only two of which, 'apparently' (285, 29) and 'allegedly' (479, 16), are adverbs of attitude stance, occurring in lower key positions than the majority of stance adverbials in the COC, while the rest are circumstance (process, i.e., time and manner) or linking adverbials. These findings also tie in with Biber et. al.'s observation that "in news time dominates, followed by place, then process".[50] This finding alone reminds us that one of the prime functions and dynamics of news production is the transformation of events into a story.[51]

The remainder of this study will consider what occurs when one event in which stance adverbials are crucial to how the interactants present their case and version of events is transformed into a medium in which such markers are infrequent. It will also consider how the patterns of stance that emerged in COC are reproduced or distorted in the OMEC by its different linguistic repertoire for communicating evaluation.

### 4.3 *Verbal processes and evaluation*

[49] Ibid., 859.
[50] Ibid., 783.
[51] For this function with regard to the same events, see Dermot Heaney, "Online Print Media Coverage of a Parliamentary Select Committee's Investigations into Allegations of Doping in British Cycling", Veronica Bonsignori et al., eds., *Worlds of Words: Complexity, Creativity, and Conventionality in English Language, Literature and Culture. 1: Language* (Pisa: Pisa U.P., 2019), 77-81.

In the conversion of an oral interaction into a written report verbal processes are more than likely to be key and indeed they are highly prominent in OMEC. The key word list includes a wide repertoire of such reporting verbs, ranked as follows: 'said' (60, 1067); 'added' (65 143) claimed (67, 139); ' admitted (106, 103); 'insisted' (130, 73); 'claims' (141, 95) 'claim' (149, 127); 'says' (163, 159); 'confirmed' (168, 74); 'described' (231, 61); 'questioned' (254, 48), 'criticised' (27); 'responded' (235, 25); admitting (284, 29) 'conceded' (411, 19); criticized (309, 27); 'responded' (335, 25); 'adding' (341, 24); 'admits' (363, 22); 'insists'/ 'insisting'/'insist' (368, 22; 369, 22; 386, 21), 'claiming' (381, 21); 'reiterated' (417, 19 ); 'called' (421, 79).

It will be noted that a high proportion of these are far from neutral. Fifteen of these key verbal processes could be defined as marked. It is true they may indicate disendorsement (de B. Clark 2006, 88[52]) (e.g. claim*) and are therefore used to signal journalists' neutrality by distancing themselves from the source. However, 'claim*' could be said to have acquired a frequently negative evaluative prosody, as what is usually affirmed is regularly presented as not entirely convincing or acceptable, as is evident from the following sample concordances taken from the OMEC:

(15) UKAD has still not been able to verify that claim
(16) Brailsford had barely made his claim before it was confirmed Pooley had in fact been in Spain
(17) He even claimed in one interview that the package had nothing to do with Brad
(18) Brailsford was testing credulity when he initially claimed to be unaware of its dark reputation

Similarly, other key verbal processes imply that a proposition is in some way cast in doubt, either because it is too emphatic and therefore to be distrusted (insist*) or because it acknowledges a compromising element (conceded, admit*). The concordancer tool, for example, shows that 'admit*' collocates with 'Brailsford' and 'mistakes'. That contrasts with the wide use of stance adverbials in that part of COC – CWS1, largely meant by Brailsford to convey another impression of his conduct. This would suggest that the press has a predilection for a negative evaluation and for attributing and stressing blame. During the CWS1 this verbal process is used to offer an exculpating concession that Brailsford makes at the end of his lengthy hearing, offering it as the admission of a fair-minded man willing to accept a degree of responsibility, but not serious dereliction of duty. The keyness ranking, on the contrary, indicates a strong element of disendorsement, and also a tendency to magnify aspects that are prejudicial to this particular witness. The effect of this employment of verbal processes is augmented by nouns like 'allegations' (121, 128), 'claims' (141, 95) and 'claim' (149, 127). The keyword analysis points to an evident imbalance between the purpose of stance adverbials

[52] Caroline M. de B. Clark, *Views in the News* (Milan: LED, 2006).

in the words of witnesses and the negative evaluative twist they receive in media reports and raises issues of whether all witnesses receive an equally fair hearing in press accounts.

4.4 *Evaluative lexis and phrases*

Keyword analysis of lexis reveals a deep-rooted evaluative stance when reporting such institutional procedures. Take, for example, the high keyness of 'doping' (58, 942) in the press corpus. On the contrary, this socially and culturally loaded word does not occur at all within the 500-word keyword threshold of the Committee hearing, where the more neutral term 'enhancement' (236, 6) (collocating with 'performance') is used, a choice that is not key within the 500 threshold in OMEC. Similarly, the word 'confidentiality' (164, 22) in the COC does not occur within the 500-word cut off in the OMEC. This has relatively high keyness in the COC, because it is an aspect of the issue that Brailsford and Sutton particularly stress as one of the reasons why doctors might not communicate an athlete's medication to coaches or team managers. The press evidently gives much less importance to this mitigating explanation and complicating factor, with the result that it is not likely to enter into the public's more simplified understanding of the doping issue.

A further foregrounding of negative connotation is reflected in the high keyness of 'wrongdoing'. Ranked 89 with 226 instances, this word is not key within the 500 threshold of the Committee corpus. It is true that in roughly half the concordances it collocates with 'deny' or 'no'; but in the other half it collocates with 'alleged', whereas no 'allegations' are actually made during the hearing. Here too, alleg* is an item that has acquired a negative evaluative prosody. Good things, after all, are not alleged. This may, of course, be simply due to the basic dynamics of newsworthiness. As Partington et. al. observe: "[u]nfavourable uses outweigh favourable ones ... but this may well be due in part to the critical function that newspapers generally perform".[53]

Certain key lexical items provide a further indication of how evaluation is achieved through collocation, particularly noun phrases. '[J]iffy' (17, 429), 'bag' (46, 455), 'contents' (126,141) and 'package' (303, 1097) collocate variously with 'mystery', 'notorious', 'infamous'. Of course, these collocations exist to forefront newsworthiness, but also to shape negative prejudices towards the issue. 'Scandal' (ranked 234 with 36 occurrences) works in a similar way as it occurs in noun phrases like 'doping scandal, 'team sky doping scandal', 'jiffy bag scandal'; 'jiffygate scandal', 'Bradley Wiggins Scandal', none of which occur in the COC. The creation of noun phrases is, of course, a particularly seductive means of evaluation as the noun phrase formulates opinion (more easily detectable in verb phrases) an acquired given. From Fowler on,[54] noun phrases resulting from reification have been recognised as a particularly persuasive means of evaluation, reformulating opinion (more easily detectable in verb phrases)

[53] Alan Partington et. al., *Patterns and Meanings in Discourse*, 51.
[54] Roger Fowler, *The Language in the News* (London: Routledge, 1991).

as a given fact.[55] Tabbert[56] refers to this process "packaging up", by which implicit negative evaluations go "unquestioned by the reader" (136).

Such collocations also confirm the press's role in creating self-sustaining newsworthiness. If these items are notorious, it is in large measure because the press has made them so and has told us so, even though no such words are used in the hearings themselves. Such noun phrases can present readers with a pre-packed meaning, which in this case contrasts not only with the lexis used by the committee and witnesses but also with the way in which the information is elicited and defined through stance adverbials in that context.

Additionally, the critical stance that is so prominent in key lexis of OMEC corresponds largely to the CWS2 sub-section of the COC, where Simon Cope comes under so much pressure from the committee because of his inability to account for his conduct in delivering the package. This suggests that media stance to all the 'defence' witnesses mostly takes its cue from the weaker performance of one individual in particular and downplays the efficacy of the other performances, even though the committee itself is less categorical in its negative stance towards them, and indeed does not contest their stance as robustly as it does that of Cope.

## 5. Concluding Remarks and Reflections

This study has shown some key linguistic changes that occur in the transformation of parliamentary select committee witness sessions into news stories in the mainstream online media about investigations into doping in professional cycling. In particular, it has demonstrated the importance of stance adverbials in the former, for witnesses and committee members alike, and the implications for public perception of this issue entailed in their substantial absence in the online media account and their substitution with other evaluative items and prosodies.

Detailed analysis of the distribution of the centrally key attitude adverbials, exemplified by the instance of 'certainly', across the three witness sessions has shown that there is a convergence of stance between the committee and those witnesses who are critical of Team Sky and British Cycling staff. As the committee members make their own stance clear during the proceedings, they could be accused of pronouncing a verdict that provides the media with clear signals as to how to evaluate the entire proceedings. As a result, certain aspects of the witnesses' testimonies are played down or indeed neglected in favour of a more polarised and negative evaluation of the affair, in which many conventional newsworthiness considerations prevail over completeness of information; for example, about issues of confidentiality and

[55] See also Michael Billig, "The Language of Critical Discourse Analysis: The Case of Nominalisation", *Discourse and Society*, 19.6 (2008), 785-800; Aleksandra Cichocka et al., "On the Grammar of Politics: Or Why Conservatives Prefer Nouns", *Political Psychology*, xx.xx (2016), 1-17.

[56] Ulrike Tabbert, "Crime through a Corpus: The Linguistic Construction of Offenders in the British Press", Christiana Gregoriou, ed., *Constructing Crime: Discourse and Cultural Representations of Crime and 'Deviance'* (Basingstoke: Palgrave Macmillan, 2012), 130-144.

athletes' health, which are certainly worthy of attention in the debate over the place of TUE's in sport.

The origins of the long inquiry date back to 2015 when a series of articles about suspicious blood tests in endurance runners appeared in *The Sunday Times* (referred to in House of Commons, 2018, 5). In its final Fourth Report,[57] where it reflects on the evidence presented in all witness sessions, the Committee confirms its debt to the press:

> The work of whistleblowers and investigative journalists has helped to bring this [the prevalence of doping] to the fore. Rather than their work being tantamount to a "declaration of war" on sport, a very ill-judged statement, it should be seen as a warning light that was acted upon too late.

Such statements testify to a very close relationship between the politicians and the press, especially when they share an agenda. They also remind us that committees owe much of their increasing importance in public life to the interest of the media, especially when they are convened to investigate matters of immediate public interest, like sport. The press itself has come under the Committee's scrutiny, particularly for unethical practices like celebrity phone tapping.[58] Nevertheless, the Committee tolerated the under-nuanced account of the 'scandal' that accompanied its work in the reports analysed here.

The present writer is a cycling fan and a critic of Team Sky, principally because of what has been called 'financial doping', namely the unchallenged buying power that allowed it to pack its team with the best riders available, thus suffocating meaningful competition from other teams, a strategy now known as 'putting the race to sleep'. However, linguistic analysis raises questions about an inquiry that has taken place at this intersection between sport, journalism, politics, bioethics and professional ethics. Team Sky continues to race, as nothing has been proved against it and no disciplinary action has been possible for the sports governing bodies and agencies. At the same time, the reputation of certain individual team members has been irreparably tarnished, and they continue to operate under a cloud of suspicion and undiminished skepticism. Due to this symbiosis with the press, the Committee's work has amounted to little more than insinuation. For many readers that might be more enjoyable than fully understanding the complexities of the issue and difficulty for team managements of fully controlling the actions of individual cyclists and team staff.

[57] House of Commons, *4th Report,* 9.
[58] House of Commons, *Unauthorised Tapping into or Hacking of Mobile*.

Walter Giordano

# Ethics and Accessibility to Knowledge in Prescription Drug Commercials in the USA[1]

**Abstract**: Direct-To-Consumer Advertising (DTCA) of prescription drugs in the USA is authorized and controlled by the Food and Drug Administration (FDA) that issues guidelines and limitations to the communication of such drugs. This study investigates the discourse that renders the perception of the disease's knowledge, the accessibility to information on the condition and on the drug, and the way the roles of the physician and of the patients are conveyed in the commercials aired on TV in the USA. The diseases range from diabetes to some forms of cancer, cholesterol control, heart diseases and depression and more. The corpus consists of 72 commercials, from 2001 to 2019, advertising different drugs. The analysis is carried out, on the one hand, on the way the linguistic strategies lead promotional discourse: it intertwines and aligns with the sensitiveness of the underlying product's selling point. On the other hand, the investigation focuses, in particular, on the role of physicians, revealing interesting aspects in terms of an implicit loss of their scientific independence in the treatment of the diagnosis.

Keywords: *doctor/patient relationship*, *DTCA*, *ethics in advertising*, *LSP*, *medical discourse*

## 1. Introduction

This study aims at investigating Direct-To-Consumer Advertising of prescription drugs (DTCA) in the USA, to detect linguistic elements that may demonstrate a shift both in the patients' and doctors' roles and consequently in the balance of power between the two actors in their ordinary life.

'Ask your doctor if *XYZ* is right for you' is a fairly unknown phrase in most of the world, but it is one that most Americans know by heart. This, or some variation of it, is commonly used in DTCA, a relatively new phenomenon born during the 1980s.[2] Nowadays, 80 of these commercials (on average) run on American television every hour of every day.[3]

DTC ads and commercials are divided into three categories:

- 'Health or help seeking'*:* they 'contain information about a disease or condition' and recommend talking to a doctor, without mentioning any specific drug.
- 'Reminder'*:* they 'contain the name of a drug and other limited information', without any

[1] This study contributes to the national research programme ?Knowledge Dissemination across media in English: continuity and change in discourse strategies, ideologies, and epistemologies?, financed by the Italian Ministry for the University (nr.2015TJ8ZAS).

[2] Michael S. Wilkes et al., "Direct-To-Consumer Prescription Drug Advertising: Trends, Impact, and Implications", *Health Affairs*, 19.2 (2000), 110-128.

[3] Eric Palmer, "Top 10 DTC Pharma Advertisers", *FiercePharma* (2013), available at *www.fiercepharma.com*.

mention of its use, safety or effectiveness.

- 'Product specific'*:* they mention both the drug name and its therapeutic use, with information about its safety and effectiveness. This is the most common type of DTCA.[4]

They cover a wide range of "clinical conditions, from relatively minor ones", like hair loss,[5] to more serious problems, such as cancer and cardiology issues.[6] DTCA is permitted in only two countries: the United States of America and New Zealand,[7] and remains a controversial topic. Its benefits are still very much questioned, to the extent that in 2015 the American Medical Association called for a ban.[8] However, this solution seems unlikely, as the Supreme Court actually considers advertising a form of commercial speech, which falls under the First Amendment's protection of freedom of speech.[9]

## 2. Theoretical background

As DTCA still remains a divisive matter, literature has primarily focused on its positive and negative aspects. Arguments in favor of DTCA are:

- Educational potential

Proponents of DTCA believe advertising could be a source of information about "medical diseases and their treatment".[10] However, content analysis shows that DTCA mostly emphasizes the benefits and might be difficult to understand for a person "with average health literacy"[11] and while it might contain information about symptoms, it rarely does about the causes and prevalence of the disease or the drug's mechanism.[12]

- It improves the quality of care

[4] Lynette R. Bradley and Julie M. Zito, "Direct-to-Consumer Prescription Drug Advertising", *Medical Care,* 35.1 (1997), 86-92.
[5] Ibid., 86.
[6] Joanne Kaufman, "Think You're Seeing More Drug Ads on TV? You Are, and Here's Why", *The New York Times* (December 24, 2017), *www.nytimes.com*.
[7] Paul Biegler, "Filling in the Gaps: Priming and the Ethics of Pharmaceutical Advertising", *Kennedy Institute of Ethics Journal*, 25.2 (2015), 193-230.
[8] Janelle Applequist and Jennifer Ball, "An Updated Analysis of Direct-to-Consumer Television Advertisements for Prescription Drugs", *The Annals of Family Medicine*, 16 (2018), 211-216.
[9] Lowell E. Schnipper, "Direct-to-consumer of Cancer Treatments", *Clinical Advances in Hematology & Oncology*, 15.10 (2017), 748-750. Miriam Schuchman, "Drug Risks and Free Speech: Can Congress Ban Consumer Drug Ads?", *New England Journal of Medicine*, 356.22 (2007), 2236-2239.
[10] Biegler, *Filling in the Gaps*, 195.
[11] Dominick Frosch et al., "A Decade of Controversy: Balancing Policy with Evidence in the Regulation of Prescription Drug Advertising", *American Journal of Public Health*, 100.1 (2010), 24-32.
[12] Ibid., 25.

Some surveys have shown that it can not only prompt people to contact doctors, but also have a better, more thoughtful conversation with them.[13] It can also help remove the stigma from some conditions, like ED (Erectile Dysfunction) or depression.[14]

- It promotes adherence to prescribed regiments

In this case, the ad acts like a reminder for the condition and treatment, while strengthening the physician's recommendation in the eye of the patient and therefore his compliance to it.[15]

- It encourages competition and lower prices

Although some scholars suggest that advertising might increase pharmaceutical prices, there is also the possibility that it would reduce them, the reasoning being that these are guided by demand and not advertising costs (although evidence is unclear), and that a more competitive market usually leads to lower prices.[16]

Arguments against DTCA are:

- It overemphasizes the benefits

From 1997 to 2006, 84% of the regulatory letters issued by the FDA regarding DTCA had been about downplaying the side effects, exaggerating the effectiveness of the drug or both.[17] In DTCA, the risks are usually "buried in the narrative", as the headings are reserved for benefits.[18] Risk information also often misses "quantitative data", which might help the listener to better assess the side-effects of the drug.[19] Commercials are also guilty of presenting a mismatch between the images shown (e.g. happy or relaxed people) and the side effects' recitation, and "research has shown that when the visual and the verbal messages are discordant, the visual tend to predominate".[20]

- It promotes the use of new drugs before the risks are known

In a content analysis reported by Wilkes, Bell and Kravitz,[21] 40% of the ads examined used claims of "innovativeness" in the pharmaceutical landscape, but new does not always equal better, as the "safety profiles" of new drugs are generally less known.

[13] C. Lee Ventola, "Direct-to-consumer Pharmaceutical Advertising: Therapeutic or Toxic?", *Journal of Health Communication*, 21.2 (2011), 228-239; Richard Weinmeyer, "Direct-to-consumer Advertising of Drugs", *Journal of Ethics*, 15.11 (2013), 954-959.
[14] Ventola, *Direct-to-consumer*, 673.
[15] Ibid., 673.
[16] Ibid.
[17] Julie M Donohue et al., "A Decade of Direct-to-Consumer Advertising of Prescription Drugs", *New England Journal of Medicine*, 357.7 (2007), 673-81.
[18] Wilkes, *Direct-to-consumer*, 116.
[19] Ventola, *Direct-to-consumer*, 674.
[20] Ibid., 674.
[21] Wilkes, *Direct-to-consumer* 116.

- Overmedication and manufactured diseases

In a content analysis of DTCA, none of the sample ads mentioned lifestyle changes as an alternative to medication, and when diet, exercise or otherwise healthy lifestyle choices were presented as beneficial to the patient, it was always in combination with the drug.[22] As a matter of fact, critics say that advertising might go as far as to push what constitutes an illness in order to widen the market.[23]

- It is not sufficiently regulated

Some critics believe that the rules "are too relaxed"[24] and that the control system is slow and inefficient, being the FDA critically understaffed and underfunded.[25]

- It increases costs

DTCA advocates believe that it may reduce costs for patients who, thanks to pharmaceutical management, could avoid paying expensive surgery later; as this claim remains unverified,[26] there is some concern that it encourages, instead, the use of expensive medications, which do not have any specific improvements comparing to "older and cheaper" drugs.[27]

Great emphasis has also been put on the consumer perspective, and "the literature provides some evidence that consumers are increasingly aware" of DTCA,[28] especially if they are taking prescription drugs, believe their health care plan would cover the cost, hold a positive view of DTCA, have a greater exposure to magazines or are frequent viewers of TV.[29] In a 1999 study, Bell, Kravitz and Wilkes found that attention to drug prescription is guided by 'subjective utility' as it was higher for the ads that covered a condition experienced by the consumer.[30] Therefore, it can be said that DTCA awareness is led more "by specific medical concerns than by general health worries".[31] When in poor health, consumers are not only more aware of the ads, but they also have a more positive opinion of their utility in their health decision making process.[32] In some surveys, consumers stated to have achieved a better understanding of treatments and conditions thanks to DTCA and that they did use this information to make their medical decisions.[33] As a matter of fact, the 'primary justification' for

[22] Frosch et al., "Creating Demand for Prescription Drugs: A Content Analysis of Television Direct-to-Consumer Advertising", *Annals of Family Medicine*, 5.1 (2007), 6-13.
[23] Frosch, *A Decade of Controversy*, 27.
[24] Ventola, *Direct-to-consumer*, 681.
[25] Donohue, *A Decade of Direct-to-Consumer*, 679.
[26] Ventola, *Direct-to-consumer* 673.
[27] Ibid., 682.
[28] Aparna Deshpande et al., "Direct-to-Consumer Advertising and Its Utility in Health Care Decision Making: A Consumer Perspective", *Journal of Health Communication*, Vol. 9 (2004), 499–513.
[29] Robert A. Bell et al., "Direct-to-Consumer Prescription Drug Advertising and the Public," *Journal of General Internal Medicine* 14.11 (1999), 651-657.
[30] Ibid., 656.
[31] Ibid., 654.
[32] Deshpande, *Direct-to-Consumer Advertising*, 511.
[33] Frosch, *A Decade Of Controversy*, 25.

DTCA is always the consumers' need for more information, in order to assume "greater responsibility over their health".[34]

However, a study by Faerber and Kreling[35] that focused on commercials for prescription and OTC drugs that aired between 2008 and 2010, found that even if the overall frequency of objectively false claims was low, over half of the claims (both in OTC and prescription drugs ads) were potentially misleading, i.e. "true when taken literally" but that may be still confusing for the consumer because of "omissions, exaggerations, opinions and meaningless associations".[36] Moreover, it has been questioned whether consumers understand and interpret correctly the information contained in DTCA, with many noticing the contradictory nature of having a class of medications that needs to be prescribed by a qualified and trained expert, only to advertise the same drugs to a public lacking those very skills.[37] A false or incorrect belief might, in fact, come not only by a misleading ad but also from a miscomprehension on the part of the consumer, with the further possibility of an overlap between the two.[38]

Another element to take into consideration is the fairly common use of "emotional and persuasive appeals" in these ads.[39] The problem with these appeals is that the consumer might ignore benefit and risk information and ask for a treatment for inappropriate reasons such as fear, anticipated happiness in case of product use and anticipated regret in the opposite case.[40] In their study, Frosch et al. found that almost the totality (95%) of their sample exploited a positive appeal, by showing characters living a happy life after using the product and 69% of the ads used a negative appeal, by showing characters "in a fearful state" before using the drug.[41]

As a matter of fact, a study by Biegler and Vargas[42] has shown that the use of pleasant music and imagery in drug's advertising encourages not only positive feelings toward the promoted drug and a greater belief in its safety and effectiveness but also a "greater intention to request the drug from a physician".[43] This is the result of an effect called 'evaluative conditioning', which occurs when pairing an object with a stimulus 'of positive valance',[44] thus enabling the "transfer" of positive feelings from the stimulus to the object.[45] 'Evaluative conditioning', therefore, activated through imagery, leads to

[34] Joshua Perry et al., "Direct-to-Consumer Drug Advertisements and the Informed Patient: A Legal, Ethical, and Content Analysis", *American Business Law Journal*, 50.4 (2013), 729-778.
[35] Adrienna Faerber and David. Kreling, "Content Analysis of False and Misleading Claims in Television Advertising for Prescription and Nonprescription Drugs", *Journal of General Internal Medicine*, 29.1 (2013), 110-118.
[36] Ibid., 116.
[37] Wilkes et al., *Direct-to-consumer*, 116.
[38] Louis A. Morris et al., "Miscomprehension Rates for Prescription Drug Advertisements", *Current Issues and Research in Advertising*, 9.1-2 (1986), 93-117.
[39] Faerber and Kreling, *Content Analysis,* 111.
[40] Frosch et al., *Creating Demand*, 10.
[41] Ibid., 9.
[42] Paul Biegler and Patrick Vargas, "Feeling Is Believing: Evaluative Conditioning and the Ethics of Pharmaceutical Advertising", *Journal of Bioethical Inquiry,* 13 (2016), 271-279.
[43] Ibid., 274.
[44] Ibid., 272.
[45] Biegler, *Filling in the Gaps*, 204.

foster beliefs about the drug that are generated by said imagery and not by its "actual properties", likely impacting "the autonomy" in the consumer's decision.[46]

According to Biegler advertising endangers the autonomous medical decision-making process, because it acts like a "prime",[47] which is "an environmental cue that makes associate concepts, behaviors, and goals more psychologically accessible to people, influencing their response to a subsequent related stimulus". [48] In particular, pharmaceutical advertising works as a prime by representing the drug as "effective",[49] by eliciting "positive affect" through the already cited "evaluative conditioning"[50] and by representing taking the drug as a "social norm", therefore exploiting the "tendency to mimic others".[51] Priming pushes people to pursue the drug's prescription, sometimes "doggedly".[52] However, because people are unaware of the priming effect, they tend to rationalize their tendency with an unjustified favorable belief about the drugs' effectiveness and safety, [53] belief that, when taken into account while making a decision, undermines the autonomy of the whole process.[54]

Despite reservations about the role played by DTCA in creating informed consumers,[55] these latter tend to consider it positively.[56] This optimistic opinion, however, may be influenced by a misplaced faith in the regulatory system of DTCA, as participants in the survey of Bell, Kravitz and Wilkes 1999's study show. Approximately, 50% believed that ads needed to be pre-approved by the FDA, respectively 21% and 43% believed that only "extremely effective" or "completely safe" drugs could be advertised, and 22% believed that advertising of drugs with serious side effects had already been banned. All of these statements are, however, false.[57] In general, consumers hold a more positive view of DTCA, in terms of value provided, than physicians.[58] Physicians' opinions tend more toward the negative, because DTCA doesn't give "enough information on cost, alternative treatment options, or adverse effects".[59]

However, DTCA is effective in generating requests for an advertised drug's prescription.[60] Surveys have also indicated that DTCA prompted patients to ask for a specific treatment, which was, in many cases, unsuited for their condition.[61] In these cases, the physician might have to re-contextualize what people have learned from the ad as promotion and lower their expectations, which could not only

[46] Biegler and Vargas, *Feeling Is Believing,* 276.
[47] Biegler *Filling in the Gaps,* 220.
[48] Ibid., 196.
[49] Ibid., 200.
[50] Ibid., 204.
[51] Ibid., 205-206.
[52] Ibid., 202.
[53] Ibid., 213.
[54] Ibid., 220.
[55] Perry et al., *Direct-to-Consumer,* 777.
[56] Deshpande et al., *Direct-to-Consumer Advertising,* 511.
[57] Bell et al., *Direct-to-consumer,* 654-655.
[58] Deshpande et al, *Direct-to-Consumer Advertising*, 500.
[59] Andrew R. Robinson et al., "Direct-to-Consumer Pharmaceutical Advertising: Physician and Public Opinion and Potential Effects on the Physician-Patient Relationship", *Archives of Internal Medicine*, 164.4 (2004), 427-432.
[60] Ibid., 428.
[61] Kevin M. Fain and G. Caleb Alexander, "Mind the Gap: Understanding the Effects of Pharmaceutical Direct-to-Consumer Advertising", *Medical Care*, 52.4 (2014), 291-293.

divert the focus from a meaningful discussion about the condition and the range of available treatments,[62] but also be a draining and 'time-consuming' experience for the doctor.[63] This is particularly true in the oncology field, where doctors are almost always informed about all the available treatments, and the DTCA-prompted discussion might simply lead to the patient's disappointment.[64]

However, patients' requests are often met by doctors, despite "reservations".[65] As a matter of fact, there is some evidence supporting the idea that physicians feel pressured to prescribe a specific drug, when requested by a patient.[66] Opponents of DTCA are worried that this pressure could lead to prescriptions of new drugs, whose risks and benefits are less known.[67] In addition, a few studies have actually revealed that physicians are more likely to prescribe a questionable or inappropriate drug to DTCA-prompted patients.[68] As a matter of fact, "patient demand is the most commonly offered physician explanation for inappropriate prescribing".[69]

Doctors are somewhat reluctant to deny DTCA-prompted patients' requests for a certain drug, as they are fearful of losing them as their patients.[70] As a matter of fact, in a survey, participants were asked what their reaction would be if their doctor refused to prescribed the requested (advertised) drug, 24% thought they would try to obtain the prescription from another doctor, and 15% said they would switch to another doctor.[71]

DTCA opponents believe that pharmaceutical industries have found in the consumer "armed with information from DTC ads" the perfect tool for pressuring physicians[72] and, in fact, since the late 1980s pharmaceutical companies have begun to consider DTCA "as an integral part of their marketing strategy".[73] Before that, most of their marketing efforts were directed towards physicians[74]. However, since the FDA loosened its restrictions on DTCA in 1997, there has been a "dramatic upsurge",[75] a shift "from this traditional 'push' strategy to a more aggressive 'pull' strategy",[76] resulting in greater attention and financial investment in advertising directed at consumers.[77]

[62] Wilkes et al., *Direct-to-consumer*, 121.
[63] Ventola, *Direct-to-consumer,* 681.
[64] Schnipper, *Direct-to-consumer advertising*, 748.
[65] Robinson et al., *Direct-to-Consumer Pharmaceutical,* 428.
[66] Fain and Alexander, *Mind the Gap*, 293.
[67] Wilkes et al., *Direct-to-consumer*, 120.
[68] Weinmeyer, *Direct-to-consumer advertising of drugs*, 957.
[69] Robinson et al., *Direct-to-Consumer Pharmaceutical,* 431.
[70] R. Sthephen Parker and Charles E. Pettijohn, "Ethical Considerations in the Use of Direct-To-Consumer Advertising and Pharmaceutical Promotions: The Impact on Pharmaceutical Sales and Physicians", *Journal of Business Ethics*, 48 (2003), 279-290.
[71] Wilkes et al., *Direct-to-consumer,* 119.
[72] Richard L. Kravitz, "Direct-to-Consumer Advertising of Prescription Drugs: Implications for the Patient-Physician Relationship", *JAMA*, 284.17 (2000), 2244.
[73] Julie M. Donohue, "A History of Drug Advertising: The Evolving Roles Of Consumers And Consumer Protection", *The Milbank Quarterly*, 84.4 (2006), 659-99.
[74] Ibid., 679.
[75] Biegler, *Filling in the Gaps,* 194.
[76] Parker and Pettijohn, *Ethical Considerations,* 280.
[77] Robinson et al., *Direct-to-Consumer Pharmaceutical*. 427.

Donohue argues that the patients and consumers' rights movements were a necessary condition for this development.[78] Both these movements demanded more information, respectively from health professionals and health insurance companies.[79] Therefore, as the cultural and 'regulatory climate' moved toward empowering consumers and patients to make decisions about their health care, the incredibly misbalanced relationship between doctors and patients that existed during the middle decades of the twentieth century began to change.[80] As a matter of fact, after World War II, physicians were well-respected authority figures and patients were seen as "incapable of making medical decisions" and completely dependent on their physicians, who regularly withheld information about their condition and treatment.[81]

In opposition, the idea of a more autonomous and "empowered" patient started to catch on.[82] With the development and diffusion of technologies such as the Internet allowing for the circulation of information,[83] patients were able to rise from the passive and oblivious role – where the Hippocratic view of "the doctor-patient relationship" had casted them – to the role of "partners" of the physician in the decisions regarding their health.[84]

There was no place for DTCA in a "model of health care" focused on the physician as a keeper of all medical knowledge and that relegates the patient to the passive role of just accepting the doctor's diagnosis. Consequently, in this case, all the marketing efforts of the pharmaceutical companies are to be directed toward the physicians, "because they control all access to patients".[85] However, when the "model of health-care" has at its center the patient, who consequently needs to be informed "on the types of medical products and treatments that are available", then it makes sense for drug companies to "market directly to the consumer".[86]

As a matter of fact, for DTCA advocates, Direct-To-Consumer advertising is a "natural outgrowth" of the changes in the physician-patient relationship, because they consider it an educational platform.[87] From their point of view, it contributes to create an informed patient that doesn't rely exclusively on the information provided by the doctors.[88] Receiving more information enables the patients to reclaim a more active and "autonomous" role in "their own medical treatment decisions".[89]

This analysis of the content of DTCA necessarily intertwines with the theoretical background of the discourse of advertising and LSP (Language for special purposes). Both of them can be recognized by a number of characteristics that can be effectively found in the corpus analyzed. The discourse of advertising implies not only promotional discourse but also the function to "inform, misinform, worry

[78] Donohue, *A History of Drug Advertising,* 662.
[79] Ibid., 662.
[80] Wilkes et al., *Direct-to-consumer,* 113.
[81] Donohue, *A History of Drug Advertising,* 669.
[82] Perry et al., *Direct-to-Consumer,* 740.
[83] Reshma Jagsi, "Conflicts of Interest and the Physician-Patient Relationship in the Era of Direct-to-Patient Advertising", *Journal of Clinical Oncology*, 25.7 (2007), 902-905.
[84] Perry et al., *Direct-to-Consumer,* 740.
[85] Parker and Pettijohn, *Ethical Considerations,* 282.
[86] Ibid., 282.
[87] Perry et al., *Direct-to-Consumer,* 758.
[88] Weinmeyer, *Direct-to-consumer advertising of drugs*, 956.
[89] Perry et al., *Direct-to-Consumer,* 758.

or warn".[90] The commercials analyzed here seem to fit perfectly in this Cook's definition: they act as informative tools, too, for patients, warn them for side effects and sometimes create worries or awareness that may turn into more information on the drug and on the treatment. In this modern era, advertising conveys models and cultural stimulation, and does not promote a single product *tout court*: advertising aims to promise better life conditions, better health and better social status. The focus of promotion shifts from the product to the expected benefits coming from its purchase.[91] Patients may perform also the function of link between the message and the doctor, as is clarified in the following chapters. The commercials investigated are not only examples of advertising types and discourse, but their content can be included under the umbrella of specialized discourse, medical discourse for instance.

Gotti gives a number of characteristics[92] of specialized discourse. A discourse community is fundamental to its spreading. Physicians and patients can represent a community altogether, where patients limit themselves to report the information or, possibly, are required to acquire more information elsewhere, too. Physicians should instead perform the role of informed scientists in the dual relationship. The specialized medical discourse here, shows some of the characteristics given by Gotti: conciseness, that in medical discourse appears as abbreviations and acronyms;[93] opacity, depending on the speaker's use of specialized terminology due to his/her profession[94] and willingness to be deliberately opaque; lack of emotion in written texts, unless specialized language is used in advertising: in this case, emotion comes out and becomes a part of the communication message;[95] monoreferentiality, as the reference to any specialized term is clearly directed to a single concept or meaning.[96]

## 3. Research aim

This study investigates how linguistic elements may shape the communicative strategies in DTCA in the USA. In particular, it focuses both on the degree of accessibility of patients to relevant medical information, via specialized medical discourse and on the degree of understanding and control over the message conveyed by the commercials. The following step of the analysis is to investigate the possible change in the balance of power in the patient/physician relationship, whether a growth in patients' autonomy in managing their disease treatment and informative process corresponds to a loss in physicians' professional independence.

## 4. The corpus

[90] Guy Cook, *The discourse of advertising* (London and New York: Routledge, 1992), 5-9.
[91] Hosney M. El-Daly, "Toward an Understanding of the Discourse of Advertising: Review of Research, and Special Reference to the Egyptian Media", *Global Journal of HUMAN SOCIAL SCIENCE*, 12.4 Version 1.0 (2012), 79-93.
[92] Maurizio Gotti, *Investigating Specialized Discourse* (Bern: Peter Lang, 2005), 33-49.
[93] Ibid., 40; Olga Kuzmina et al., "Problems of the English Abbreviations in Medical Translation", *Procedia – Social and Behavioral Sciences*, 199 (2015), 548-554.
[94] Gotti, *Investigating Specialized Discourse*, 25.
[95] Ibid., 36.
[96] Ibid., 33.

The corpus consists of 72 commercials of 65 different prescription drugs (7 of them are broadcasted in two different campaigns). The time span goes from 2001 to 2019. The main parameters, which gradually narrowed the corpus, were: 1 – prescription drugs 2 – aired in the USA 3 – a significant length, higher than 30 sec.4 – easy accessibility to audience, which turned out to be their presence on the main video channel, YouTube 5 – presence of text and spoken part. The videos presented a textual component along with an animated and spoken component. They mainly performed patients in their ordinary lives, who spoke and told their experience; the great majority of the commercials investigated presented a voiceover (both male and female) that described the usage, characteristics and warnings of the drug. The prescription drugs that are included in the investigated corpus are the following (Table 1):

| Abilify | Brilinta | Eliquis | Intermezzo | Lynparza | Paxil | Rozerem | Trulicity |
|---|---|---|---|---|---|---|---|
| Advair | Celebrex | Emgality | Invokana | **Lyrica** | Plavix | Singulair | Truvada |
| Aimovig | Cialis | **Entresto** | Januvia | **Lyrica** | Pradaxa | Spiriva Resmimat | Valtrex |
| Ambien CR | Contrave | **Entresto** | **Keytruda** | Mavyret | Pristiq | **Stelara** | Verzenio |
| Anoro Ellipta | **Crestor** | **Entyvio** | **Keytruda** | Mirapex | Prolia | **Stelara** | VESIcare |
| Avandia | **Crestor** | **Entyvio** | Lamisil | Nasonex | **Repatha** | Strattera | Vytorin |
| Boniva | Cymbalta | Epclusa | Latuda | Nexium | **Repatha** | Symbicort | Wellbutrin XL |
| Breo Ellipta | Eliquis | Humira | Levitra | Opdivo | Rexulti | Toviaz | Zoloft |

Table 1: drugs advertised in the corpus of commercials.

The drugs advertised in the corpus represent the treatment for a number of conditions and diseases that include, among a wide range, arthritis, depression, diabetes, high cholesterol, heart attacks, erectile dysfunction, Crohn's disease, fibromyalgia, asthma, osteoporosis and also ovarian cancer and Non-small cell lung cancer.

## 5. Methodology

The commercials were transcribed from their spoken part, and the textual part was reported along with the transcript in a machine readable format. The file was then analyzed at two levels: a quantitative level, which investigated mainly the linguistic characteristics (presence of modality, of specialized medical language, abbreviations, paralanguage, etc.) and at a qualitative level, investigating the corpus to outline the role of physicians, and the possible implicit loss of their scientific independence.

The linguistic quantitative investigation was carried out at two sub-levels: a first analysis was carried out on the text of the transcribed file of 21,755 words. This analysis was aimed at studying the

presence and the nature of linguistic elements that help decode the strategic communication of the commercials. The second analysis was carried out on the frequency of the variables identified. This latter investigation represented the basis for the qualitative analysis that followed right after.

### 5.1 *Quantitative analysis*

Analysis of the text

The document counts 21,755 words, counted by KHCoder, a professional software used for text mining and analysis. The list of the first 40 most common occurrences was sorted, eliminating some stop words like conjunctions and prepositions. The list follows in Table 2.

| words | count | type | Proportion (relative frequency) |
|---|---|---|---|
| doctor | 247 | noun | 0,011354 |
| May | 232 | verb | 0,010664 |
| blood | 105 | noun | 0,004826 |
| problem | 100 | noun | 0,004597 |
| include | 90 | verb | 0,004137 |
| Risk | 88 | noun | 0,004045 |
| effect | 82 | noun | 0,003769 |
| heart | 82 | noun | 0,003769 |
| medicine | 82 | noun | 0,003769 |
| prescription | 82 | noun | 0,003769 |
| Help | 79 | Verb | 0,003631 |
| Tell | 76 | Verb | 0,003493 |
| Ask | 74 | Verb | 0,003402 |
| Side | 72 | adjective | 0,00331 |
| symptom | 69 | Noun | 0,003172 |
| Pain | 67 | Noun | 0,00308 |
| cause | 65 | Verb | 0,002988 |
| Ad | 63 | Noun | 0,002896 |
| Day | 55 | Noun | 0,002528 |
| increase | 53 | Verb | 0,002436 |
| people | 51 | Noun | 0,002344 |
| result | 51 | Noun | 0,002344 |
| Adult | 49 | Noun | 0,002252 |

| | | | |
|---|---|---|---|
| infection | 49 | Noun | 0,002252 |
| Vary | 49 | Verb | 0,002252 |
| patient | 47 | Noun | 0,00216 |
| depression | 42 | Noun | 0,001931 |
| liver | 42 | Noun | 0,001931 |
| treatment | 42 | Noun | 0,001931 |
| work | 42 | Verb | 0,001931 |
| use | 40 | Verb | 0,001839 |
| condition | 38 | Noun | 0,001747 |
| severe | 37 | adjective | 0,001701 |
| feel | 37 | Verb | 0,001701 |
| stroke | 36 | Noun | 0,001655 |
| right | 35 | adverb | 0,001609 |
| sugar | 34 | Noun | 0,001563 |
| high | 34 | adjective | 0,001563 |
| reduce | 33 | Verb | 0,001517 |
| cancer | 32 | Noun | 0,001471 |

Table 2: Word frequency in the transcribed document

This table shows that the word 'doctor' is the most recurring in the document (247 occurrences). As it is possible to see, the modal 'may' recurs 232 times. This feature is pretty common, as 'may' is the typical modal verb used in the list of possible side effects, both in the written version (the side effects sheet in the drugs' boxes) and in the spoken version in the commercials.

Medicine-related words can be found, that are pretty much intelligible to patients (prescription, pain, symptoms, blood, etc.). Another group of more sophisticated specialized medical lexemes is present; it includes the names of the conditions (Crohn' disease, emphysema, primary peritoneal cancer, etc.), of side effects (asthma, priapism, rash, tenderness, dizziness or fainting, diabetic ketoacidosis, etc.) and of drugs' active ingredients or drugs types (anticholinergic medicines, salmeterol, alpha-blocker, thioridazine, sulfonylurea, serotonin, norepinephrine, etc.).

The use of scientific discourse is seen as a way to spread the knowledge gap between the medical care providers and the patients. Specialized medical terminology in communication, means having patients withhold medical assessment, accept it and subordinate their opinion about the condition.[97]

Another linguistic characteristic that is clearly evident is the presence of a high number of abbreviations and acronyms. In Table 3 a list of abbreviations and their occurrence is reported. Abbreviations are strategic to make discourse opaque as they can confuse and alienate unfamiliar

[97] Anssi Perakyla, "Authority and Accountability: The Delivery of Diagnosis in Primary Health Care", *Social Psychology Quarterly*, *JSTOR*, 61.4, (1998), 301-320.

audiences.[98] In the transcription document, abbreviations and synonyms are rarely explicated. Most of them refer to conditions, active ingredients or medical protocols.

| | | | |
|---|---|---|---|
| AFIB | 18 | NSAID | 5 |
| COPD | 16 | BRCA | 4 |
| HIV | 14 | CR | 4 |
| LDL | 11 | C-O-P-D | 4 |
| ACE | 8 | MBC | 4 |
| MAOI | 8 | UC | 4 |
| PrEP | 8 | ARB | 4 |
| A1C | 6 | TB | 3 |
| ALK | 5 | FDA | 3 |
| EGFR | 5 | OTHER | 42 |

Table 3: Abbreviations and acronyms in the document

Paralanguage takes on an important role as much of the information, disclaimers, and recommendations are reported in small fonts, reeling text (with different speed from one commercial to another) or fading text.

The tense of verbs is also particularly important. The imperative is present in all of the 72 commercials, directing the consumer to act. Sometimes, it is present also in slogans and taglines, as in the case of Keytruda "Get your chance to live longer" (that, needless to say, appeals also to the patient's emotional status). The use of the imperative form implies that the patient/consumer is responsible for 1) getting information on the drug from the physician; 2) being responsible for being aware of side effects; 3) reporting information on the progress of the treatment or possible side effects.[99] In this paradigm, the patient becomes the responsible actor for the treatment and condition knowledge, for being aware of side effects and for initiating and keeping the relationship with the physician. The inversion of agentivity from doctor to patient will be discussed further on in this chapter. Here, from a linguistic point of view, the imperative sentences are reported: 'ask your doctor', which is the common start of the patient/doctor relationship from which this kind of advertising would stem. It calls the patient to act and ask the doctor to prescribe the drug. In some ads (9 out of 72) the imperative 'ask your doctor' is followed by 'if', that introduces a factor of uncertainty ('ask your doctor if BONIVA is right for you', 'ask your doctor if you are healthy enough for sexual activity (LEVITRA)'. The conditional clause introduced by 'if' that follows the imperative 'take/don't take… *if*', 'tell your doctor

[98] Andrew H Hales et al., "Alienating the Audience: How Abbreviations Hamper Scientific Communication", *APS Observer* 30.2 (2017), 22-24.
[99] Staci Defibaugh, "'I Talked to My Doctor:' Constructing the Neoliberal Patient-consumer in Direct-to-Consumer Pharmaceutical Advertising", *Discourse, Context & Media*, 28 (2019), 1-7.

*if*', implies that the patient is responsible for assuming a drug 'if' any of the listed conditions exists. 'If' is also present after the imperative form 'stop the treatment *if*', 'tell your doctor *if*', 'alert your doctor *if*' when the patient is called to action to report any symptoms, worsening or any other side effect (51 commercials out of 72).

Analysis of the variables

All the transcripts were then classified in 13 variables in an Excel file:

1. Name
2. Condition
3. Year
4. Minutes
5. Characters speaking, voice-over or both
6. Tagline
7. Typical phrase
8. "Tell your doctor"
9. Recommended by my doctor
10. Other mentions of a doctor
11. Is a doctor portrayed?
12. Does the doctor speak?
13. Information on condition

Variable 3 and onward are statistically countable and comparable. Values related to variables 6, 7, and 8 are made of text which can be investigated from a discourse analysis perspective, variables 4 and 5 are meant to record aspects connected with the structure of the commercial. Variables 9-13 refer to the informative aspects of the commercial, particularly on the presence/role of the physician. Some of the variables above need further explanation:

- Tagline: the slogan of the brand/ad. Sometimes the narrator does not actually say it and it only appears as a text at the end of the ad.
- Typical phrase: 'Ask/Talk to your doctor about brand'. Sometimes it is: 'Ask your doctor if brand is right for you', which is the recommendation to hear a doctor to confirm the medication is suitable to the patient's condition.
- 'Tell your doctor': it is common for these ads to ask the viewer to tell their doctors (or seek emergency medical help) if the condition does not improve, if they show symptoms of an allergic reaction or other reactions to the medicine. They might also be asked to report the medicines they take and their medical conditions or if they are planning to have or have had a medical procedure, or to talk to their doctors before they stop taking the medicine. The variants to this sentence are 'call your doctor', 'Alert your doctor' or 'see your doctor'.
- Recommended by my doctor: when the patients tell their story in the ad and how their doctor

told them about the brand and recommended the medication.
- Does the doctor speak?: If so, what he/she says is reported in the transcription
- Information on condition: if the ad explains the condition and/or its origins.

The shortest video is for NASONEX (0.33 minutes), while the longest is for LYNPARZA (2.24 minutes). The tagline is not present in 39 out of 72 commercials. The voiceover is not present in 5 out of 72 commercials only. The typical phrase is present in most commercials, 59 out of 72. The recommendation to "tell your doctor" is a recurring feature in the commercials, as it can be found in 65 out of 72 commercials. The information on condition is not reported in 59 commercials out of 72. The physician is present in 16 commercials out of 72 and recommends the drugs in 16 commercials out of 72 (the last two occurrences do not refer to the same 16 commercials). The doctor speaks in 11 out of 72 commercials.

These results represent the basis for the qualitative analysis.

### 5.2 *Qualitative analysis*

DTCA commercials are a peculiar type of advertising because they perform a double, hybrid role, promotional and informative, as they not only are designed to sell a product, but also report both health information on conditions and side effects information.[100] From the linguistic analysis, we learn that the inversion of agentivity from doctor to patient is clear in the majority of commercials investigated, where the patient performs an active role.

The patient speaks in first person in 47 out of 72 commercials, telling his/her story and experience, often leveraging on an emotional component (especially in the 3 commercial advertising cancer treatment). The inversion of agentivity that is detectable in the commercials is interesting if crossed with the data processed here. In the classic paradigm, where the doctor tells the patient what to do in case of a disease, the active role here is inverted: the patient is being foregrounded, becoming the promoter of the drug to the physician, who is backgrounded in the commercial. Patients tells their story and the way they have treated the disease. This is an example of activation and passivation according to van Leeuwen.[101] The patient is also given the responsibility to get information on the condition and on the drug, as well as its side effects. This responsibility requires knowledge[102] as the roles that patients take on is not merely as consumers but also as testimonials of the drug.

Although the presence of the word 'doctor' is very significant in the DTCA commercials (247 occurrences), and the word 'patient' is less significant (47 occurrences), the physician does not perform an active role, as he/she is present in 16 commercials out of 72 and speaks in the first person in only 11 commercials.

Furthermore, the 'recommended by my doctor' variable, that is the reference made by patients to their doctor as they tell their story, reports only 16 out of 72 occurrences in the document. This leads

[100] Ibid., 3.
[101] Theo van Leeuwen, "The Representation of Social Actors", Carmen R. Caldas-Coulthard and Malcolm Coulthard, eds., *Texts and Practices* (London and New York: Routledge, 1996), 32-70, 43-44.
[102] Defibaugh, *I talked to my doctor*, 5.

to consider that in the other cases the promotion of the drug is not backed by a physician's advice. This result is also confirmed from the picture of the concordances (Table 3): it shows that the word 'doctor' is objectivized when the voiceover recommends to ask for advice, to report symptoms or previous conditions. These considerations may infer an observation on the balance of power in modern DTCA advertising of patients and doctors. The risk, in such a paradigm, is that the doctor is not portrayed as an 'agent' but as a mere executor of the patient's requests.

As a matter of fact, those who criticize DTCA preconize that the shift in power in the relationship between the doctor and the patient may degenerate, leaving doctors in the questionable position of just having to provide "expensive products and treatments", which may or may not be appropriate in regards to the patient's condition.[103] As DTCA pushes patients to ask for a sponsored drug, it distorts their expectations about the prescribing behavior of the doctor.[104] Consequently, the danger is for health-care professionals to oblige to the logic of "customer satisfaction" to an unhealthy degree, forgetting the duty to evaluate not just "the patients' request", but their problem.[105]

## 6. Results

From a linguistic quantitative and qualitative perspective, the analysis of the commercials sketches a picture of a peculiar type of patient/doctor relationship. The use of verb modes like imperative and conditionals, of first-person pronouns, medical specialized language, abbreviations and paralanguage help position patients; they are often foregrounded when their function is promoting the drug to doctors. When necessary, patients are objectivized, and they are given the responsibility to 'tell' or 'call' the doctor to report symptoms or side effects. The qualitative investigation highlights the focus on the balance of power between the two roles (patient/doctor). In the classic paradigm, the doctor is the actor, the one giving advice, with the responsibility of informing and activating the process of knowledge that patients usually accepted.

The new schemata, suggested by DTCA commercial, seem to deprive doctors of their role of actors and advisors, whilst charging the patients with the responsibility of getting information on the drug, on the condition and on the side effects. The focus is then on the activation of the patient's role and on the backgrounding of the physician's. It seems clear that DTCA affects the doctor-patient relationship: it gives the patient more autonomy in the decision to purchase the medication and, at the same time, it re-writes the equation of the balance of power in the relationship, where the physician seems to lose identity and independence. These considerations may pave the way to possible further research on the continuously changing balance of power in the relationship professionals vs consumers, as it is depicted in mass-media communication.

[103] Parker and Pettijohn, *Ethical Considerations,* 282.
[104] Robinson et al., *Direct-to-Consumer Pharmaceutical*, 431.
[105] Kravitz, *Direct-to-Consumer Advertising,* 2244.

Cinzia Giglioni

# Ethics, Pricing, and the Pharmaceutical Industry. Corporate Communication Faces Drug-Cost Issues[1]

**Abstract**: The paper investigates arguments brought forth by a big corporation in the pharmaceutical industry when dealing with bioethical issues. Apologetic strategies (or lack of thereof) and their discursive manifestations are investigated. More specifically, the paper focuses on press releases issued by Mylan, the pharmaceutical giant, when the company was strongly criticized in 2016 over hiking the price of one of its best-selling drugs.

Previous findings on the presence and articulation of apologetic discourse in corporate communication correlated problematic con text – the financial crisis – with texts – annual company reports. The rationale underlying this paper is the same as a strong relationship between controversial issues – in this case bioethical issues – and discursive outcomes was expected also in a different field of investigation.

Keywords: *corporate communication*, *press release*, *ethics*, *apologetic strategies*

## 1. Intent and Methodology

### *1.1 Apologetic discourse and bioethical issue: Drug price controversy at Mylan*

Big Pharma's image has often been threatened by the industry's questionable behaviour, and this seems to be especially true in the US, where price negotiation is not mediated at a state-level. On the one side, there is a business which cures diseases, on the other side, patients feel exploited and feel more like an attractive market than human beings. Some of the industry's business practices, such as monopoly pricing, manipulative patent litigation, and money spent on political lobbying, have eroded public trust over the years.

Mylan, a global pharmaceutical company in America, which after undergoing two acquisitions in 2007 became the second-largest pharmaceuticals company in the world, is no exception. In 2016, the company was accused of having taken advantage of its position, as in seven years it hiked the price of one of its best-selling products, i.e. the EpiPen. An investigation followed to understand if Mylan had misclassified the EpiPen under the Medical Drug Rebate Program, therefore committing a type of fraud which is frequently used by pharmaceutical manufacturers. In October 2016, Mylan settled the investigation with the U.S. Department of Justice and paid a million-dollar penalty.

The intent of this study is to analyze apologetic discourse strategies in corporate communication when companies face a crisis, i.e. when "a predictable event that occurs at an unexpected time

[1] This paper was presented at XXVIII AIA Conference, which was held in Pisa in 2017. A similar version of this abstract is included in the conference's book of abstracts (*2017aiaconference.fileli.unipi.it*).

threatens the wellbeing of stakeholders".[2] Previous findings by the same author on the presence and articulation of apologetic discourse in corporate communication[3] correlated context – the economic and financial crisis – with text – the annual company reports of Financial Times Index constituents, thus engaging in what Bhatia defined as Critical Genre Analysis, which is aimed to "demystify social and organizational actions".[4] The results showed massive recourse to apologetic strategies on the part of CEOs running poor performing companies.

The same rationale underlies this paper as a strong relationship between controversial issues – bioethical issues, as is the case with life-saving drugs pricing – and discursive outcomes was expected also in a different field of investigation.[5]

*1.2 Research questions*

As mentioned in 1.1, Mylan was strongly criticised in 2016 over rising drug prices. That moment is the expected privileged moment for the deployment of apologetic discourse strategies on the part of company executives when they are suspected of misbehaving. It is in the company's interest to justify their actions with their key public and stakeholders, and this idea of justification is what is meant in the present study for apologetic discourse.

While the term "apology" is much more frequent and used when a person or corporation acknowledges guilt and expresses regret,[6] *apologia* is a Greek term (*ἀπολογία* 'defence, a speech in defence') that can be defined more broadly as any communicative act that is given in defense of an accusation.[7] As it is explained by Keith Hearit[8], a well-known scholar in crisis communication, it is important to understand that the broader term *apologia* may contain an acknowledgement of responsibility.

Having clarified what is meant by "apologetic", the research questions addressed in this article can be outlined:

- RQ 1: Does Mylan engage in apologetic strategies when facing price controversy?

[2] Robert L. Heath, "Telling a Story: A Narrative Approach to Communication During a Crisis", in Drew P. Millar and Robert Heath, eds., *A Rhetorical Approach to Crisis Communication: Management, Communication Processes and Strategic Responses* (London and Mahwah: LEA Publishers, 2004), 167-187.

[3] Cinzia Giglioni, "Apologetic Discourse in Financial Reporting: CEO and Chairman Statements: A Case Study", in Giuliana Garzone, et al., eds., *Genre Change in the Contemporary World: Short-term Diachronic Perspectives, Linguistics Insights* (Bern: Peter Lang, 2012), 227-243.

[4] Vijay K. Bhatia, *Critical Genre Analysis: Investigating Interdiscursive Performance in Professional Practice* (London and New York: Routledge, 2017), 23.

[5] Details of previous research are provided in the bibliographic references and discussed at various points throughout this article. Focus on bioethics has been determined by the author's participation in the interests of a research group that is conducting a PRIN research project (Progetto di Ricerca di Rilevante Interesse Nazionale / Research Project of National Interest Prot. 2015TJ8ZA) on dissemination of knowledge about sensitive bioethical issues.

[6] Keith M. Hearit, *Crisis Management by Apology: Corporate Response to Allegations of Wrongdoing* (Mahwah: Lawrence Erlbaum Associates Publishers, 2006).

[7] Halford R. Ryan, "*Kategoria* and *Apologia:* On Their Rhetorical Criticism as a Speech Set", *Quarterly Journal of Speech*, 68.3 (1982), 255-256.

[8] See note 5.

- RQ 2: Does one of the strategies prevail and, if so, what is the reason?

As in previous research[9] on the presence and articulation of apologetic discourse in corporate communication, for the definition of the strategies we should rely on B.L. Ware and Wil Linkugel's definitions dating back to 1973.[10] They identified four tactics or common strategies in apologetic discourse: denial, bolstering, differentiation, transcendence. As underlined by Jasinski in his book on rhetoric[11], other scholars have proposed different conceptualizations of the types of strategies, William Benoit[12] among them.

The documents selected for the present investigation are press releases issued by Mylan in response to increased public criticism. They were retrieved from the company's website (www.mylan.com) by searching for headlines containing the word EpiPen. The search (conducted in February 2017) returned thirteen items: the highest number – five – was issued, as easily predictable, in 2016, when the case gained attention on the part of the lay public and a congressional hearing was set out.[13] Mylan took on the auto-injector in 2007, but in the previous nine years the eight press releases were related to the product focused on marketing strategies – e.g. when the company decided to offer EpiPen to U.S. schools for free – licensing agreements and product availability in new markets. Admittedly, the company never mentioned price policies.

## 2. Identification of Apologetic Strategies

Press releases are, for their very nature, quite short documents. Therefore, despite the convenience of the electronic format, they did not seem to be suited to being investigated using computerized analysis as in the previous stages of this study on apologetic strategies in annual company reports. A close reading of Mylan's press releases revealed common traits with the annual reports in terms of strategies' deployment. The most evident of these traits was the presence of the apologetic strategy called bolstering.

Bolstering implies enhancing a company's image, and there is a specific part in press releases – the boilerplate – that turned out to be the ideal place to do that. The boilerplate is that part of a press release made up by one or two paragraphs where companies describe their products and services. As other parts of this text genre, it is edited and re-contextualized since its pre-formulated nature[14] – a key feature in press releases – is meant for exploitation on the part of journalists, who will simply need to

[9] Giglioni 2012 (See note 2).
[10] B. L. Ware and Wil A. Linkugel, "They Spoke in Defense of Themselves: On the Generic Criticism of Apologia", *Quarterly Journal of Speech*, 59.3 (1973), 273-283.
[11] James Jasinski, *Sourcebook on Rhetoric: Key Concepts in Contemporary Rhetorical Studies* (Thousand Oaks, London, New Delhi: Sage Publications, 2001), 21.
[12] William L. Benoit, *Accounts, Excuses, and Apologies: A Theory of Image Restoration Strategies* (Albany: State University of New York Press, 1995); William L. Benoit, "Another Visit to the Theory of Image Restoration Strategies", *Communication Quarterly*, 48.1 (2000), 40-44.
[13] Congressional involvement is not new since drugs' pricing has frequently been a concern for the U.S. Congress. See Bruce A. Chabner and Thomas G. Roberts Jr., "Setting Fair Prices for Life-saving Drugs", *Virtual Mentor*, 1 (2007), 38-43.
[14] Geert Jacobs, *Preformulating the News: An Analysis of the Metapragmatics of Press Releases* (Amsterdam and Philadelphia: John Benjamins, 1999).

cut and paste a few lines to inform their readers about the type of company they are reading about. Catenaccio,[15] following Bhatia's identification of moves in advertising genres,[16] segmented the press release in eleven moves. Move number nine is the boilerplate. Not all moves are always present, however some are "obligatory": the company logo, the caption, the headline and the lead (with justification of newsworthiness). When press releases started to be published in the newsroom section of corporate websites, some of their features underwent major changes. Still, boilerplates were there, typically attached to the bottom of the documents. When online, as is the case with the five texts investigated in this article, boilerplates need a "scroll down effort" which confirms the "boundary character of the boilerplate description".[17]

Press releases' writers usually don't change boilerplates, they tend to copy the ready-to-use description of the company, and this is what happens with four of the five boilerplates included in the press releases analyzed in this article. Here below the textual realization of the move called boilerplate is attached as an example.

> Mylan is a global pharmaceutical company committed to setting new standards in healthcare. Working together around the world to provide 7 billion people access to high quality medicine, we innovate to satisfy unmet needs; make reliability and service excellence a habit; do what's right, not what's easy; and impact the future through passionate global leadership. We offer a growing portfolio of more than 2,700 generic and branded pharmaceuticals, including antiretroviral therapies on which approximately 50% of people being treated for HIV/AIDS worldwide depend. We market our products in more than 165 countries and territories. Our global R&D and manufacturing platform includes more than 50 facilities, and we are one of the world's largest producers of active pharmaceutical ingredients. Every member of our more than 40,000-strong workforce is dedicated to creating better health for a better world, one person at a time. Learn more at mylan.com.[18]

A simple skim reading of the boilerplate is likely to give an overall impression about the company, but at the same time, "the real identity of press release is betrayed by the positive bias towards the company".[19] Bolstering seems to be inevitable in this part of the press release. Both specialized – i.e. journalists – and lay audience are aware of the persuasive, face-saving intent of the text. When facing crisis, as is the case with price controversy, the balance between persuasive and informative seems to be compromised, the result often being a deeper distrust on the part of that audience the author of the press release originally wanted to persuade in relation to a company's behavior in a specific situation. This seems to be in line with Foremski,[20] a former journalist and PR consultant, who listed the 'spin' – i.e. the provision of ready-made (favorable) interpretations that press releases invariably place on facts, and which conflicts with the ostensibly purely informative intent of the genre – among the reasons for advocating the "death of the press release".

[15] Paola Catenaccio, *Corporate Press Releases: An Overview* (Milan: CUEM, 2008), 43.
[16] Vijay K. Bhatia, *Worlds of Written Discourse* (London and New York: Continuum, 2004), 56.
[17] Catenaccio, 63.
[18] Press releases issued 25 Aug., 29 Aug., 7 Oct. and 16 Dec. 2016.
[19] Catenaccio, 30.
[20] Cit. in Catenaccio, 65.

The second, quite evident, strategy of apologetic discourse that has been detected in the press releases under examination is transcendence. Transcendence, according to Ware and Linkugel's definition, implies reframing the situation in a broader context so as to minimize responsibility. In annual company reports issued in times of economic and financial crisis, the crisis was indicated as mainly responsible for companies' poor performance. Similarly, in Mylan's press releases (here below) the responsibility is shifted from the company to the context, and this may imply reference to different factors: the healthcare system, the current insurance landscape, U.S. healthcare crisis, pharmaceutical supply chain, pricing system, broad systemic issues.

> With the current changes in the healthcare insurance landscape, an increasing number of people and families have enrolled in high deductible health plans, and deductible amounts continue to rise. This current and ongoing shift has presented new challenges for consumers, and now they are bearing more of the cost.…[21]

> Mylan CEO Heather Bresch said, 'we recognize the significant burden on patients from continued, rising insurance premiums and being forced increasingly to pay the full list price for medicines at the pharmacy counter. Patients deserve increased price transparency and affordable care, particularly as the system shifts significant costs to them. However, price is only one part of the problem that we are addressing with today's actions. All involved must take steps to help meaningfully address the U.S. healthcare crisis, and we are committed to do our part to drive change in collaboration with policymakers, payers, patients and healthcare professionals'.[22]

> As the health insurance environment has evolved, even by the implementation of the Affordable Care Act, patients and families ... have faced higher costs for their medicine.[23]

> Mylan CEO Heather Bresch commented, 'because of the complexity and opaqueness of today's branded pharmaceutical supply chain and the increased shifting of costs to patients as a result of high deductible health plans, we determined that bypassing the brand system and offering an additional alternative was the best option'.[24]

> Mylan CEO Heather Bresch commented, 'while it is important to understand the outdated and complex system that determines what someone pays for medicine in the U.S., hardworking families don't need an explanation, they need a solution'.[25]

> Unfortunately, families will continue to face sticker shock for medications and may be forced to make difficult choices until the pharmaceutical pricing system is reformed to address the increasing shift of costs directly to consumers. Pharmaceutical pricing is too far removed from the patient at the pharmacy counter and not designed for today's increasingly consumerized healthcare system.[26]

[21] Press release issued 22 Aug. 2016.
[22] Press release issued 25 Aug. 2016.
[23] Ibid.
[24] Press release issued 29 Aug. 2016.
[25] Press release issued 16 Dec. 2016.
[26] Ibid.

> This is an issue that will impact virtually every family on a high deductible plan, regardless of what medicine they are taking. That is why it is critical that all industry participants and government leaders come together to seize the opportunity to make fundamental changes to the system to ensure access to medicine.[27]

The excerpts provided are meant to show textual outcomes of the strategy called transcendence in the five press releases selected for the analysis. With customary care, corporate writers embed the company's CEO's words in the press releases they prepare. As scholars have underlined,[28] these quotations are frequently used to communicate self-promotional information. They are often fictional and they are aimed at manipulating the audience since their supposed objectivity – the writer is not perceived as subscribing to the quoted person's opinion – is considered to be more effective.[29]

Despite the recurrence of some lexical items in those parts of the text where the strategy called transcendence is displayed (e.g. "system" occurs five times in the press release dated 25 Aug. 2016), a shifting from macro textual analysis to linguistic analysis proper did not seem to be in line with the basics of this article. If it is true that, in previous research on annual company reports, strategies proved to involve lexical and syntactic patterns in their textual realization,[30] the size of the texts under examination did not call for such a type of analysis, which generally suits longer texts to allow identification of meaningful recurrences. However, the small size of the corpus investigated here, which is motivated by its specificity, is a limitation that the study displays. Therefore, quantitative analysis will be included in further steps of the research on corporate press releases (forthcoming).

The third strategy is called differentiation and – according to Ware and Linkugel's definition – it is aimed at creating distinctions to redefine a questionable situation. Mylan seems to engage in the strategy in a rather subtle manner, if compared to the way companies scrutinized in previous stages of the research engaged in the same strategy. By way of an example and to give an idea of the strategy's realization in one of the CEO's letters to shareholders that have been previously analyzed, it is worth mentioning that British Airways' CEO diverted his readers' attention from the general picture of the company's poor financial situation to operational details (e.g. short-landed baggage at Heathrow), which were both described and visualized in prominent positions of the letter. Mylan's way of distracting the reader's attention from the company's questionable behavior – i.e. rising EpiPen's price – consists in cramming the relevant press releases with "Important Safety Information" and "Indications" on how to use the pharmaceutical device. The press release issued 16 December 2016, full of pictures, also includes a video about EpiPen. If the scope of these many lines, pictures and video on the one hand is to provide readers with useful information – the informative intent of the genre is still detectable – on the other hand these features also help the company to avoid facing price controversy issues, thus (implicitly) pursuing the persuasive intent of the genre.

[27] Ibid.
[28] Jacobs, *Preformulating the News*.
[29] Ibid.
[30] Cinzia Giglioni, "Variation in Apologetic Strategies in Annual Company Reports: Rhetorical Functions of Lexical-Syntactical Patterns", in Paola Evangelisti Allori et al., eds, *Evolution in Genre: Emergence, Variation, Multimodality* (Bern: Peter Lang, 2014), 45-65.

The company does not want the situation to be perceived as questionable and they simply decide not to address the topic, as long as they can. When a newsworthy piece of news forces the company to address the problem, as is the case when Mylan agrees to the terms of a nearly five hundred million dollar settlement with the U.S. Department of Justice, the very first sentence readers can find in the relevant press release is the following: "The terms of the settlement do not provide for any finding of wrongdoing on the part of Mylan Inc. or any of its affiliated entities or personnel" (press release issued 7 Oct. 2016). The settlement is also presented as a solution for future problems related to the EpiPen's classification as a non-innovator drug. The positive slant of the press release is evident in the expected C-level executive's quote:

> Mylan CEO Heather Bresch commented, 'This agreement is another important step in Mylan's efforts to move forward and bring resolution to all EpiPen Auto-Injector related matters. The agreement is in addition to the significant steps Mylan has taken in relation to EpiPen Auto-Injector over the past several weeks, including the unprecedented, pending launch of a generic version of EpiPen Auto-Injector and expansion of our patient access programs for this product. Entering into this settlement is the right course of action at this time for the Company, its stakeholders and the Medicaid program'.[31]

The last apologetic strategy we should consider at this point is indirect denial. According to the definition provided by Ware and Linkugel, indirect denial is the strategy that entails response to charges that are never explicitly acknowledged. This strategy is not very productive in the press releases under examination, still when it appears it occupies a prominent position, as is the case with the press release issued 25 August 2016 (herewith below), where comparatives – one of the strategy's distinguishing morphological traits identified in a previous stage of the research[32] – made their appearance in the very title. Both comparatives and verbs that take the re- prefix proved to have a crucial role in the indirect denial strategy, as they trigger presupposition.[33] Through the epistemic operation of presupposition the reader obtains the implicit information deriving from the claim, where information is explicitly stated. The following are a couple of examples of indirect denial from one of the press releases under investigation (issued 25 Aug. 2016), where the lexical use of 'further' activates the presupposition mechanism:

| | |
|---|---|
| CLAIM | "Mylan taking immediate action to <u>further</u> enhance access to EpiPen Auto-Injector" |
| PRESUPPOSITION | access was previously poor |
| CLAIM | "Mylan is taking the following immediate actions to help <u>further</u> address the needs of patients and families" |
| PRESUPPOSITION | needs were underestimated |

[31] Press release issued 7 Oct. 2016.
[32] Giglioni 2014 (See note 29).
[33] Stephen C. Levinson, *Pragmatics* (New York: Cambridge U.P., 1983), 167-225.

It is worth noting that all the press releases under investigation show traces of the indirect denial strategy as the company relatively frequently refers to the plans and improvements it is carrying on to face such a controversial situation.

## 3. Final Remarks

Two of the four strategies identified in previous steps of the research by the same author, i.e. bolstering and transcendence, have been recognized in terms of presence and articulation also in Mylan's press releases related to the EpiPen price controversy. The strategy called differentiation, also present, is articulated in a different way if compared to its deployment in the annual reports investigated in the first part of the research. In fact, this strategy consists in and is limited to the "Important Safety Information" and "Indications" the company attaches to all product-related press releases. As to the last identified strategy, i.e. indirect denial, the company's – and its CEO's – elusive attitude towards the EpiPen price controversy plays a crucial role and makes this apologetic strategy difficult to identify (See § 2). Recognition of possible wrongdoing is avoided, and information about the price controversy is held back.

The same attitude on the part of the company is displayed also in another key genre in corporate communication, i.e. the annual company report. Mylan's 2017 annual report is different from the reports issued by the London Stock Exchange listed companies – which had been previously studied – and the differences are evident both in terms of textual organization and authorship. The CEO's and Chairman's letters, a traditional tool for external corporate communication,[34] are not included in Mylan's report, possibly because the company follows the Dutch Law. At this point it needs to be mentioned that big US corporations sometimes move their tax domicile by acquiring foreign companies to shift their profits offshore – as happened with Apple, to mention a quite well known case – and pharmaceutical companies make no exception. This somehow contributes to their bad reputation: Emily Willingham's article for *Forbes* published during the EpiPen crisis[35] (23 Aug. 2016) and eloquently entitled 'CEO of EpiPen Maker Mylan Sees 671% Compensation Increase in 8 Years' provides one of the numerous examples of this perception. However, what has been under consideration in this article are purely textual outcomes of crisis management in relation to many texts which represent a key genre of corporate writing, i.e. the press release.

In Mylan's 2017 annual report opening 'Overview'[36] the story of the U.S. billionaire generics market, the largest in the world, is narrated and so is the EpiPen's story from the Eighties' to 2016. Nevertheless, almost no reference to any controversy is made, and if it is, it is skillfully used by corporate writers to convey a positive image of the company: "We believe that the claims in the lawsuit are without merit and intend to defend against them vigorously.… The Company believes that

[34] Giuliana Garzone, "Annual Company Reports and CEO's letters: Discoursal Features and Cultural Markedness", in Christopher N. Candlin and Maurizio Gotti, eds., *Intercultural Aspects of Specialized Communication* (Bern: Peter Lang, 2004), 311-342.
[35] Retrieved at *www.forbes.com* in August 2017.
[36] *Mylan Annual Company Report* , retrieved at *www.mylan.com* in August 2017.

it has strong defenses to current and future potential civil litigation, as well as governmental investigations and enforcement proceedings".[37]

There seems to be no need for self-justification, not in a more than six-hundred-page annual company report of an extremely successful company. Findings from previous studies[38] proved that all the four apologetic strategies were only used by CEOs of poorly performing companies, which is definitely not the case with Mylan, a company that has dramatically increased its profits and turnover in the last few years and whose "commercially determined goals"[39] are openly presented in corporate communication documents, including the press releases under investigation.

In the long term, Heather Bresch, in her role as Mylan's CEO, could not avoid addressing the EpiPen Auto-Injector pricing matter forever and she had to testify before the United States House of Representatives Committee on Government Reform in September 2016. A prepared testimony of her congressional hearing was released ahead of the hearing and might be considered in future steps of research. Still, if readers visit the company's official website, they will find the following company description, which can be considered as a further example of the strategy called bolstering:

> Mylan is a global healthcare company focused on making high quality medicines available to everyone who needs them. Our heritage of being a provider of generic pharmaceuticals goes back to our founding in West Virginia in 1961. Today, we are passionate champions for better health around the world with a platform unmatched in the industry.[40]

As demonstrated in previous research by the same author, when companies perform economically and financially well – i.e. CEOs cannot be blamed for wrongdoing – the only strategy that remains detectable in the narratives of annual reports is bolstering. As the aim of this apologetic strategy is to enhance company image by associating it to abstract values[41] bolstering is always present. In fact, bolstering proved to be the easiest apologetic strategy to be identified also in Mylan's press releases.

Significantly, the fact that transcendence is detectable in the majority of the press releases under investigation may become the indicator of a (price related) problem the company would have never addressed explicitly. Critical Genre Analysis may, in this case, serve to uncover inconvenient information skillfully disguised by corporate writers, whose job is in fact to shed the best possible light even when companies confront highly controversial issues, like in the case of drugs' price.

[37] *Mylan Annual Company Report*, 174.
[38] Giglioni, "Annual Reports of the FT30 Index Members: Deployment of Apologetic Strategies in CEO and Chairman's Statements", *International Journal of Language and Linguistics*, 4.1 (2017), 88-94.
[39] Joe Collier and Ike Iheanacho, "The Pharmaceutical Industry as an Informant", *Lancet*, 360.9343 (2002), 1405-1409.
[40] Retrieved at *www.mylan.com/en/company* in September 2017.
[41] See Mark L. Robinson, *Marketing Big Oil: Brand Lessons from the World's Largest Companies* (US: Palgrave MacMillan, 2014, 51). Robinson's volume underlines how Exxon attempted to use the bolstering strategy as an image restoration strategy.

Emanuele Brambilla

# Knowledge Dissemination and Cultural Specificity in Greenpeace's Canned Tuna Guides[1]

**Abstract**: Spurred by scientific discoveries on the benefits of omega-3 fatty acids on human health (Galli/Risé 2009), the consistent rise of global per capita fish consumption (FAO 2016: 2) has dramatically bred overfishing. Particularly, tunas are often caught through unsustainable practices that lead to bycatch and push marine species to the brink of extinction. This 'tuna crisis' is bioethically relevant as it calls on companies and consumers to reflect upon "the responsibility to maintain the generative ecology of the planet, upon which life ... depends" (Post 2004: xi). Generally uninformed of what lies behind tuna cans or sashimi menus, consumers must rely on the investigations carried out by environmental organisations to make ethical purchasing choices. Against this backdrop, this paper analyses the knowledge dissemination strategies (Garzone 2006) whereby environmental organisations try and influence the dietary and purchasing choices of tuna lovers. The analysis focuses on three 'tuna guides' issued by Greenpeace in the USA, Australia and Italy. Adopting a Cultural Discourse Studies perspective (Shi-xu 2015), the contrastive examination unveils few differences and numerous similarities in the texts analysed. This discursive uniformity is determined by Greenpeace authorship and the global nature of the tuna crisis, but also by the discursive conventions of environmental activist culture (Horton 2004), which promote local solutions to global crises. American, Australian and Italian cultural specificities are, therefore, only apparently stifled by these discursive conventions, as total homogenisation is thwarted by the constraints of the local markets and by language, which reveals cultural specificities through idioms and puns.

Keywords: *canned tuna guide*, *environmental activist culture*, *Greenpeace*, *knowledge dissemination*

## 1. Background

The benefits of omega-3 fatty acids on human health have been confirmed in scientific settings and disseminated to the general public since the 1970s,[2] gradually turning the sentence 'Eating fish is good for your health' into a proverb or, rather, a health mantra. Together with "vigorous growth in aquaculture, which now provides half of all fish for human consumption",[3] the ever-growing demand for seafood has, thus, determined a consistent rise in global per capita fish consumption,[4] now risen to above 20 kilograms a year for the first time.[5]

[1] This study contributes to the national research programme "Knowledge dissemination across media in English: continuity and change in discourse strategies, ideologies, and epistemologies", financed by the Italian Ministry of Education, University and Research for 2017-2019 (nr. 2015TJ8ZAS).

[2] Claudio Galli and Patrizia Risé, "Fish Consumption, Omega 3 Fatty Acids and Cardiovascular Disease: The Science and the Clinical Trials", *Nutrition and Health*, 20.1 (2009), 11-20.

[3] FAO, *The State of World Fisheries and Aquaculture: Contributing to Food Security and Nutrition for All* (Rome: Food and Agriculture Organization of the United Nations, 2016), ii.

[4] Ibid., 2.

[5] FAO, *Global Per Capita Fish Consumption Rises above 20 Kilograms a Year* (2016), *www.fao.org*.

If it is true that oceans and inland waters are contributing and, especially, will contribute "significantly to food security and adequate nutrition for a global population expected to reach 9.7 billion by 2050",[6] it is also true that their regular and indiscriminate exploitation raises environmental sustainability concerns. In other words, however 'good for our health' in the short term, eating fish without pondering on the need to ration our victuals will eventually turn out to be fatal in the long run. For the moment, marine species are paying the prices of human gluttony and orthorexia, because the seafood market is plagued by overfishing and stock depletion.[7]

More than other species, the tuna has marked record catches over the last few years,[8] and the demand continues to grow[9] despite the scourge of illegal, unreported and unregulated (IUU) fishing practices;[10] in addition to their manifestly negative attributes, these practices often entail the use of destructive fishing methods (e.g. bottom trawling, cyanide fishing and ghost fishing) that often lead to bycatch. Understood as the incidental capture and killing of non-target species such as sharks, dolphins, marine turtles and seabirds (which are then generally discarded overboard), bycatch is one of the most widely recognised scourges of the Anthropocene,[11] as it is pushing the tuna and other marine species to the brink of extinction.[12]

This 'tuna crisis' is bioethically relevant as it calls on companies and consumers to reflect upon "the responsibility to maintain the generative ecology of the planet, upon which life and human life depends".[13] Generally uninformed of what lies behind tuna cans or sashimi menus, consumers find a precious advisor in environmental organisations, which commission scientific investigations to assess the environmental impact of human activities and subsequently disseminate their findings, primarily through the Web. In this regard, environmental NGOs have embarked on a challenging argumentative mission over the last few decades, that of trying and influencing consumer behaviour in the era of consumerism. Consumers are seen as the "unwitting accomplices"[14] of environmental crises, because they are deemed to be deceived into buying environmentally-unfriendly products. This deception perpetrated by raising barriers to knowledge transfer and sharing lies at the heart of the problems of the Anthropocene; as a consequence, environmental NGOs such as Greenpeace react by launching knowledge-dissemination campaigns, aimed at empowering consumers through the acquisition of relevant knowledge that, when applied to buying, will indirectly challenge corporations to modify their ways of doing business in order to make sure that their market shares do not shrink.

## 2. Materials, Methods and Aim

[6] FAO, *The State of World Fisheries and Aquaculture*, ii.
[7] Ibid., 40.
[8] Ibid., 5.
[9] Ibid., 39.
[10] Ibid., 97.
[11] Malin L. Pinsky and Rebecca L. Selden, "Climate Variability, Climate Change, and Conservation in a Dynamic Ocean", in Phillip S. Levin and Melissa R. Poe, eds., *Conservation for the Anthropocene Ocean: Interdisciplinary Science in Support of Nature and People* (London, San Diego, Cambridge, Oxford: Elsevier Academic Press, 2017), 28.
[12] Angela H. Arthington et al., "Fish Conservation in Freshwater and Marine Realms: Status, Threats and Management", *Aquatic Conservation: Marine and Freshwater Ecosystems*, 26.5 (2016), 838-857, *onlinelibrary.wiley.com*.
[13] Stephen G. Post, *Encyclopedia of Bioethics* (New York: Macmillan Publishers, 2004), xi.
[14] Greenpeace, *Toxic Threads: The Big Fashion Stitch-Up* (Amsterdam: Greenpeace International, 2012), *www.greenpeace.org*.

Against the background described in section 1, this paper analyses the discursive strategies whereby environmental organisations try and influence the dietary and purchasing choices of tuna lovers in the attempt to lead canned-tuna companies to revise their unecological production practices and consequently curb overfishing. In particular, the study focuses on three *Tuna Shopping Guides* issued by Greenpeace in the USA, Australia and Italy to assist and advise consumers in the purchase of sustainably caught tuna. The topic of the documents in question is the analysis of the performances of those tuna brands that have committed to go green by relinquishing their detrimental fishing practices and by shifting to sustainable fishing methods. The progress of each tuna company is scrutinised and described, enabling the reader to gain clearer insights into sustainability in the tuna market. This 'educational' role played by Greenpeace is instrumental in revealing the deception perpetrated by certain tuna companies and empowering consumers in their daily shopping. As a matter of fact, it is not unusual to read green claims of all sorts on the various tuna cans found on supermarket shelves; the average consumer is overwhelmed by pictures of fishermen using fishing rods or by signs reassuring buyers about the fact that dolphins are not caught during the capture of the tuna on display in the shop. However, considering "the uniformly profit-driven logic of corporations",[15] it is fairly easy to guess that corporate claims of environmental sustainability are not always backed by actual commitment.

The guides precisely serve the purpose of exposing the truth behind the tuna industry by establishing a relationship of trust with consumers. The very nature of a 'guide' presupposes the existence of a guiding subject and a guided subject. The name of the documents, therefore, already suggests that the author is presented as an authority in the field in question, who is able to accompany the non-expert to the world of tuna fishing and marketing. The consumer is the subject who needs to be guided and educated, because they have been kept in the dark for too long. The guides, thus, present themselves as texts whose aim is to put witting activists in touch with unwitting consumers.

The communication channel selected by Greenpeace to disseminate knowledge to consumers is, quite obviously, the Web, in that it "potentially ... provides a global audience to anything that is published on it".[16] Activist organisations exploit the global reach of Web-communication to spread their messages globally,[17] in order "to solve global problems"[18] in a globalised era. Therefore, by virtue of the medium whereby they are popularised, Greenpeace's canned tuna guides "can reach a potentially planetary audience of experts and laymen alike".[19]

[15] Carl E. Boggs, *Ecology and Revolution: Global Crisis and the Political Challenge* (New York: Palgrave Macmillan, 2012), 191.
[16] Giuliana Garzone, *Sharing Professional Knowledge on Web 2.0 and Beyond: Discourse and Genre* (Milano: LED, 2020), 18.
[17] Chiara Degano, "Visual Arguments in Activists' Campaigns: A Pragmadialectical Perspective", in Cornelia Ilie and Giuliana Garzone, eds., *Argumentation Across Communities of Practice: Multi-disciplinary Perspectives* (Amsterdam and Philadelphia: John Benjamins, 2017), 291.
[18] Dustin Mulvaney, ed., *Green Politics: An A-to-Z Guide* (Los Angeles, London, New Delhi, Singapore, Washington DC: SAGE, 2011), 402.
[19] Garzone, *Sharing Professional Knowledge*, 19.

The hypertextuality of the Web-mediated environment[20] has been taken into account while investigating the most significant knowledge dissemination strategies[21] used by Greenpeace to reveal the alarming scientific data on tuna fishing activities. The three tuna guides provide an example of "the fact that the hypertext system induces users to activate (alongside the traditional linear 'reading-as-such' modality) a non-linear reading modality, denominated 'hyper-reading'",[22] whereby "the reader can navigate the site and actively construct his/her own reading path".[23] Issues of co-articulation, intertextuality and granularity[24] are explored in sections 3 and 4, showing the extents to which the text of each guide "unfolds in discrete units to which access is given by means of navigation devices".[25]

In examining the three tuna shopping guides issued in the USA, Australia and Italy, the study of the promotional component inherent in Web-mediated genres[26] and in activist communication[27] has not been overlooked. Theoretical insights have been drawn from argumentation theories, including Pragmadialectics[28] and the Discourse-Historical Approach (DHA),[29] to account for Greenpeace's discursive efforts to empower consumers through the acquisition of relevant knowledge.

The multimodal nature of Greenpeace's guides has not been neglected, either, as the methodology also draws on Multimodal Discourse Analysis,[30] harnessed to investigate the interplay between words and pictures and its role in the creation of meaning in the three documents.

Moreover, the methodological toolkit also includes Cultural Discourse Studies (CDS).[31] Reference has already been made to the fact that, since Greenpeace's tuna guides are online texts, their "potential audience ... also includes a virtually infinite number of Internet surfers who simply come across the document by chance and can be potential readers".[32] In this regard, the guides might be thought to disclose the shared problems of the global tuna market to a global and globalised audience; however, they have primarily been published for the benefit of specific national audiences to foster change from the grassroots in specific national markets. A Cultural Discourse Studies approach is, therefore,

[20] Ibid., 21.
[21] Giuliana Garzone, *Perspectives on ESP and Popularization* (Milano: CUEM, 2006).
[22] Garzone, *Sharing Professional Knowledge*, 23.
[23] Ibid.
[24] Ibid., 21-24.
[25] Ibid., 24.
[26] Ibid., 19-20.
[27] Emanuele Brambilla, "Prototypical Argumentative Patterns in Activist Discourse: The Case of the Greenpeace Detox Campaign", in Frans H. van Eemeren and Bart Garssen, eds., *Argumentation in Actual Practice: Topical Studies about Argumentative Discourse in Context* (Amsterdam and Philadelphia: John Benjamins, 2019), 179.
[28] Frans H. van Eemeren and Rob Grootendorst, *Speech Acts in Argumentative Discussions: A Theoretical Model for the Analysis of Discussions Directed towards Solving Conflicts of Opinion* (Dordrecht: Floris Publications, 1984).
[29] Martin Reisigl, "Argumentation Analysis and the Discourse-Historical Approach: A Methodological Framework", in Christopher Hart and Piotr Cap, eds., *Contemporary Critical Discourse Studies* (London and New York: Bloomsbury, 2014), 67-96.
[30] Gunther Kress and Theo van Leeuwen, *Reading Images: The Grammar of Visual Design* (London: Routledge, 2006).
[31] Shi-xu, "Cultural Discourse Studies", in Karen Tracy et al., eds., *The International Encyclopedia of Language and Social Interaction* (Boston: Wiley-Blackwell, 2015), 288-296.
[32] Garzone, *Sharing Professional Knowledge*, 18.

functional to investigating how Greenpeace harmonises the activist need for transnational advocacy[33] with the local specificities of tuna fishing and marketing.[34]

This methodological approach, which draws on 'traditional' language-centred analytical tools but also acknowledges the semiotic complexity of Web discourse, has been adopted to answer the following research questions: what are the discursive characteristics and the popularisation features of Greenpeace's canned tuna guides? Which aspects of activist discourse[35] does the peculiar, Web-mediated sub-genre of the activist guide to shopping display?

## 3. Argumentative Patterns and Specialised Discourse in Greenpeace's Canned Tuna Guides

The canned tuna guides published by Greenpeace aim at advising consumers on the 'right' and 'wrong' tuna cans commonly found on supermarket shelves. This objective is achieved by describing the commitment, progress and setbacks of specific tuna companies in the national markets under analysis. The American guide presents the verdicts on twenty brands, the Australian reports on the findings of the analysis of ten companies, and the Italian displays the assessment results for eleven firms.

Despite the different national and cultural contexts in which the guides have been produced, a lot of discursive regularities stand out during the analysis. In all the guides, the bioethical nature of the tuna crisis is described by resorting to the topos of threat, positing that "if specific dangers or threats are identified, one should do something about them".[36] This premise of argumentation, which is not fallacious but based on solid scientific groundwork, is mainly conjured up by the iteration of the adjective 'destructive' ('distruttivo' in the Italian guide). Take these excerpts from the American (1), Australian (2) and Italian (3) (4) guides.

(1) Some of SUPERVALU's Essential Everyday brand tuna is caught with *destructive fishing methods* like purse seines fishing on FADs and conventional longlines.

(2) Don't be fooled by their name! Greenseas is showing no signs of keeping its commitments and is the only brand that still uses *destructive FADs*. Most Australian tuna brands are striving to do the right thing, but Greenseas has unfortunately gone backwards. We urge Greenseas to reaffirm its commitment to *end destructive fishing practices* and to improve their transparency. In the meantime, choose another brand.

(3) Mareblu è di proprietà della più grande compagnia al mondo di tonno in scatola: Thai Union. Nonostante le promesse fatte, ad oggi non ha fatto nulla per *eliminare metodi di pesca distruttivi* dai prodotti venduti in Italia, nel Regno Unito ... o in Francia.

Mareblu is owned by the world's biggest canned tuna company: Thai Union. Despite the promises made, it has done nothing so far to *eliminate destructive fishing methods* from the products sold in Italy, in

[33] Mulvaney, *Green Politics*, 401.
[34] Arthington et al., "Fish Conservation".
[35] Elizabeth A. Brunner and Kevin M. DeLuca, "The Argumentative Force of Image Networks: Greenpeace's Panmediated Global Detox Campaign", *Argumentation and Advocacy*, 52 (2017), 281-299.
[36] Ruth Wodak, *The Discourse of Politics in Action: Politics as Usual* (Basingstoke: Palgrave Macmillan, 2009), 44.

the United Kingdom ... or in France.[37]

(4) Nostromo fa parte del gruppo spagnolo Calvo, di cui Bolton (l'azienda di Riomare) ha recentemente acquisito una considerevole quota. Il gruppo inizia a muoversi, ma nonostante possegga flotte proprie, non ha alcuna intenzione di *ridurre* l'uso di *metodi di pesca distruttivi* come i FAD.

Nostromo is part of the Spanish group Calvo, of which Bolton (the company that owns Riomare) has recently acquired a substantial share. The group is starting to move, but even though it has its own fleets, it has no intention to *reduce* the use of *destructive fishing methods* such as FADs.[38]

The adjective 'destructive' always qualifies the fishing practices used by certain tuna companies; it is generally found as a left collocate of 'fishing methods', or 'fishing practices' and, especially, of the acronym 'FADs', a technical term just as 'purse seines' and 'longlines' (1). Owing to structural differences between English and Italian, the Italian plural adjective 'distruttivi' is generally found as a right collocate of 'metodi di pesca' ('fishing methods/practices'), but the predilection for qualifying fishing practices and methods as destructive holds true for all the guides. These frequently occurring collocations clarify that certain fishing practices are seen as the main problem underlying the environmental crisis in question, because they are 'destructive', in the sense that they 'destruct' marine life by leading to excessive and wasteful bycatch. As attested by the verbs 'to end', 'to eliminate' ('eliminare' in Italian) and 'to reduce' ('ridurre' in Italian) in excerpts from (1) to (4), Greenpeace's standpoint rests on the conviction that this environmental problem can be solved by the elimination, or at least by the reduction, of destructive fishing practices. Since the texts in which environmental issues are addressed often hinge on the argumentative pattern problem-solution,[39] the scheme of problem-solving argumentation as described by Garssen[40] helps to reconstruct the basic argumentative pattern underlying Greenpeace's canned tuna guides that identify bycatch as the result of using destructive fishing methods.

1. The proposed legislation X should be adopted
   1.1a Because: There is a problem Y
   1.1b Because: Adoption of the proposed legislation X will solve problem Y
   (1.1a-1.1b') (And: If there is a problem Y and the proposed legislation X solves this problem, it should be adopted)

This is actually the version of complex problem-solving argumentation, whereby the arguer first establishes "that there *is* a problem in the current situation, because it is not automatically accepted by

[37] Author's translation.
[38] Author's translation.
[39] Maria Bortoluzzi, "Energy and Its Double: A Case-study in Critical Multimodal Discourse Analysis", in Elizabeth Swain, ed., *Thresholds and Potentialities of Systemic Functional Linguistics: Multilingual, Multimodal and Other Specialised Discourses* (Trieste: EUT, 2010), 167.
[40] Bart Garssen, "The Role of Pragmatic Problem-solving Argumentation in Plenary Debate in the European Parliament", in Frans H. van Eemeren, ed., *Prototypical Argumentative Patterns: Exploring the Relationship between Argumentative Discourse and Institutional Context* (Amsterdam and Philadelphia: John Benjamins, 2017), 37.

the audience".[41] The simpler version of pragmatic problem-solving argumentation[42] could also be applied to Greenpeace's tuna guides, but "in this type of argumentation it is clear from the outset that there is a problem and that the removal of the problem is a positive thing".[43] Since consumers are deemed to be unaware of the problem of bycatch, the scheme of pragmatic problem-solving argumentation (which simply lacks premise 1.1a) does not do justice to Greenpeace's effort in explaining the environmental predicament; the scheme of complex problem-solving argumentation, thus, seems to be more relevant to the purposes of the present study.

Even though the above scheme refers to argumentation in the political context of parliamentary debates, it can be applied to the activist context by 'replacing' given elements. Considering that activist discourse generally revolves around the promotion of an environmental (or human rights) goal, the discursive implementation of the scheme of complex problem-solving argumentation in Greenpeace's canned tuna guides can be represented as follows:

1. Destructive fishing practices should be ended

    1.1a Because: There is a problem with bycatch
    1.1b Because: Ending destructive fishing practices solves the problem of bycatch
    (1.1a-1.1b') (And: If there is a problem with bycatch and ending destructive fishing practices solves this problem, the action should be carried out)

As the following sections will demonstrate, argumentation in Greenpeace's tuna guides also relies significantly on visual arguments; however, language plays a crucial role in the argumentation against the tuna industry. In the light of their recurrent character, the adjective 'destructive' – found within the noun phrase 'destructive fishing practices/methods' – and the verbs 'to end', 'to eliminate' and 'to reduce' appear as the lexical pillars of an argumentative pattern which is prototypical[44] of Greenpeace's discourse regarding tuna fishing activities.

Examples from (1) to (4) also suggest that most of Greenpeace's argumentative endeavour revolves around claiming that specific companies still use destructive fishing methods (1) (2), have done nothing to eliminate their use (3), have no intention of doing it (4), show no signs of keeping their commitments (2) or, more broadly, must improve or reaffirm their commitments (2). Argumentation in favour of the elimination of destructive fishing practices, therefore, builds on recurrent detractive and derogatory assertions regarding what tuna companies are doing, have not done and must do. From an argumentative point of view, these statements function as "specific examples ... [used] to defend the claim that there is a problem";[45] these instances of argumentation by example,[46]

[41] Ibid., 36.
[42] Ibid., 35.
[43] Ibid.
[44] Frans H. van Eemeren, "Argumentative Patterns Viewed from a Pragma-dialectical Perspective", in van Eemeren, ed., *Prototypical Argumentative Patterns*, 19-20.
[45] Garssen, "The Role of Pragmatic Problem-solving Argumentation", 44.
[46] Ibid.

thus, integrate the basic problem-solving argumentation pattern by adding vivid details and providing evidence of practical cases that are used to highlight the presence and seriousness of the environmental problem of bycatch. This slightly more complex and specific structure can be reconstructed by drawing on the argumentative pattern outlined by Garssen,[47] which stems from acknowledging that "the existential presupposition that a certain problem situation exists can be defended by ... argumentation by example: 'situation *x* exists because of example *y*'".[48]

1. Destructive fishing practices should be ended
   1.1a Because: There is a problem with bycatch
   1.1a.1 Company x has not ended its destructive fishing practices
   1.1b Because: Ending destructive fishing practices solves the problem of bycatch
   (1.1a-1.1b') (And: If there is a problem with bycatch and ending destructive fishing practices solves this problem, the action should be carried out)

Despite the presence of this basic and pivotal argumentation structure, which is prototypical of argumentative discourse in the activist context,[49] Greenpeace's guides to the purchase of sustainable tuna are not simplistic or merely promotional texts; as excerpts (1), (2), (3) and (4) show, the guides are not devoid of technical terms and their associated concepts. 'FADs', 'purse seines', 'longlines', 'pole and line' are continuously mentioned, together with the names of various tuna species (e.g. 'albacore', 'bigeye' or 'skipjack' tuna). Yet, the presence of these technical terms does not automatically render the guides technical texts and does not automatically exclude the non-expert from the intended audience. If the average reader does not know what a 'FAD' is, glossaries come to the rescue to help them not to lose their bearings in the world of fishery. In the American and Italian guides, all technical terms are underlined; when clicking on an underlined word, a scrolling section appears on the right part of the computer screen, and the user is automatically directed to one of the dedicated boxes, containing an explanation of the term at issue. This glossary, therefore, presents itself as an easy-to-use device of knowledge dissemination and acquisition, as it helps the user understand key concepts and referents of the tuna crisis. For example, after clicking on *FAD*, the interactive glossary shows that the acronym stands for 'fish aggregating device' and provides a brief explanation of the concept.

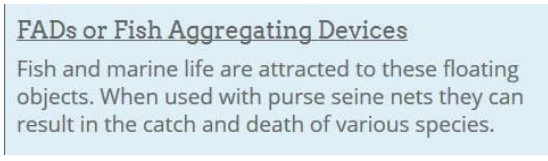
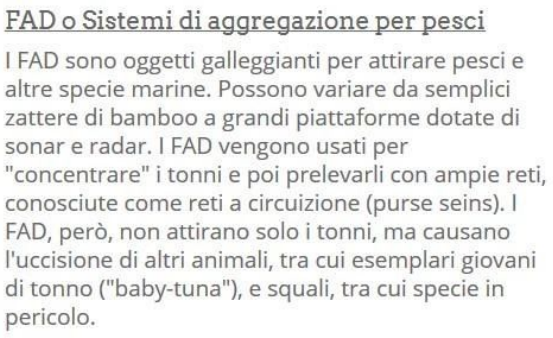



Fig. 1: Definition of 'FAD' provided by the interactive glossary in the American Guide

[47] Ibid., 44-45.
[48] Ibid., 40.
[49] Brambilla, "Prototypical Argumentative Patterns", 179.

The same happens in the Italian guide (see figure 2), where a much more detailed definition of 'FAD' is supplied.


FAD o Sistemi di aggregazione per pesci

I FAD sono oggetti galleggianti per attirare pesci e altre specie marine. Possono variare da semplici zattere di bamboo a grandi piattaforme dotate di sonar e radar. I FAD vengono usati per "concentrare" i tonni e poi prelevarli con ampie reti, conosciute come reti a circuizione (purse seins). I FAD, però, non attirano solo i tonni, ma causano l'uccisione di altri animali, tra cui esemplari giovani di tonno ("baby-tuna"), e squali, tra cui specie in pericolo.

Fig. 2: Definition of 'FAD' in the interactive Italian glossary

The translation of the text shown in figure 2 reads: "FADs or Fish Aggregating Devices. FADs are floating objects that attract fish and other marine species. They can vary from simple bamboo rafts to large platforms equipped with sonars and radars. FADs are used to gather tunas and subsequently catch them with large nets, known as purse seines. FADs, however, do not only attract tunas, but also lead to the killing of other animals, including baby tunas, endangered and non-endangered species of sharks". The reason lying behind the different length and completeness of the American and Italian definitions of 'FAD' must probably be sought in the fact that the Italian guide was the first to be drafted (in 2011), followed by the others; a possible translation process from Italian to English for compiling the American glossary may, thus, have resulted in a condensation of the propositional content,[50] thereby determining the more succinct nature of the American definition. However, the extent to which the American guide is the product of translation from the Italian has yet to be ascertained, and the above comment is speculative. If the Italian glossary seems more accurate and technical, it is also true that the American glossary is made up of a higher number of entries. For instance, the term 'purse seine' ('rete a circuizione', 'sciabica' or 'senna a sacco' in Italian) is not present in the Italian glossary; it is mentioned in the entry explaining the meaning of 'FAD' (see figure 2), where its English counterpart is, incidentally, misspelled ('purse seins'), but an explanation of this term is not provided. This discrepancy between the American and the Italian lexicographic effort has unknown causes, too.

What is sure is that these interactive glossaries, whose entries pop up only when the user clicks on the underlined terms, are a prerogative of the American and Italian guides. In the Australian guide, a link at the bottom redirects to the "Tuna glossary", a dedicated webpage helping the reader "understand all of the different labels and technical terms that are used to describe the tuna on supermarket shelves". Despite more or less slight formal differences, however, the three guides all contain the definitions of the key terms used to argue about the tuna crisis; they include, among others,

[50] Giuliana Garzone, *Le traduzioni come Fuzzy Set. Percorsi teorici e applicativi* (Milano: LED, 2015), 37-53.

'bycatch' ('bycatch o catture accidentali'), 'longline' or 'longline fishing' ('palamiti'), 'IUU illegal, unreported, unregulated fishing' ('IUU/INN Pesca illegale, non documentata e non regolata') and 'skipjack tuna' ('tonnetto striato').

## 4. Rankings, Colours and Visual Arguments

If the regular recourse to a problem-solving argumentation pattern and the presence of glossaries are enough to suggest the non-scientific nature of the three tuna guides, the layout of these activist texts can be said to be the main indicator of their hybrid nature. All the three guides are governed by a short stretch of text clarifying the topicality of what the reader is about to read: despite minor differences, all the three introductory texts posit that the content of the guide will have to do with assessments and rankings. The American guide starts by specifying that "*We've ranked* 20 well-known can tuna brands that can be found in grocery stores nationwide based on how sustainable, ethical, and fair their tuna products are for our oceans"; this introductory text is flanked on the right by the picture of a tuna can, containing the writing "20 brands *ranked*". Similarly, the Australian guide begins with "*We've ranked* the major Australian canned tuna brands and supermarkets on their commitment to sustainability and human rights". The Italian guide is also opened by a similar sentence, namely "*Abbiamo valutato* gli 11 marchi di tonno più diffusi sui nostri scaffali ... in base alle loro politiche di sostenibilità e equità, le specie catturate, i metodi di pesca usati e le informazioni che forniscono ai consumatori" (*We have assessed* the 11 most common tuna brands on our shelves ... based on their sustainability and fairness, the species caught, the fishing methods used and the information they disclose to consumers).

The excerpts presented are the first sentences of the introductory texts, which are not much longer than the excerpts themselves. Incidentally, they show that the first-person plural possessive adjective ('for our oceans', 'sui nostri scaffali') is often used inclusively, to enlist the support of the readership to the activist cause and further isolate the guilty tuna companies. The same holds true for the first-person plural subject in the Australian guide, which is later used to celebrate the activist 'victory' over Greenseas ('Thank you for taking action! We won!').

As regards the verbs 'rank' and 'assess' ('valutare' in the Italian text), from a pragmatic point of view they are functional to presenting the subject and arguer (i.e. Greenpeace) as an expert and a moral authority, in charge of assessing tuna brands and judging their conduct. Moreover, the verbs in question serve to introduce and anticipate the content of the guides, i.e. the appraisal of brands, because the results of the investigations carried out by Greenpeace on corporate performances (to be found below the introductory lines) are reduced to rankings, whereby the companies are listed from the most to the least sustainable. As figure 3 shows, the brand names are flanked on the left by numbers specifying their positions in the ranking. The challenging resolution of the tuna crisis is, therefore, discursively constructed as a competition, in which tuna brands vie for greenness. Figure 3 displays the ranking of the Italian guide, which also exemplifies the American.


Fig. 3: Company ranking in the Italian Guide

The three guides are interactive texts: even though the ranking (as shown in figure 3) might appear poor from an informative point of view, specific and more detailed information can be retrieved by clicking on the names or boxes of the single companies. A key on top of the ranking also guides the reader in the correct consultation of the text, as it invites them to "Click on a can to see the results" (American guide) and "Clicca sulla scatoletta per leggere i risultati" (Italian guide). However, the ranking already provides substantial information to the audience, who capture the essence of the tuna guide at a glance: the findings of the investigations are arranged linearly, enabling the reader to grasp which companies are performing well and which ones are not, which ones are keeping their promises to stop using destructive fishing methods and which ones are not. The ranking, thus, appears as a simple but powerful instrument of knowledge dissemination and consumer empowerment, which is also harnessed in other Greenpeace campaigns, such as Toxic Tech.[51]

The Australian guide, which has already been said to present a few formal peculiarities, has its own layout, but discovering the causes of this dissimilarity is beyond the scope of the present paper. The most striking difference between the Australian guide and the others is that the numbers showing the positions of the companies within the ranking are omitted; the brand names are, instead, flanked by a happy smiley, an indifferent smiley or a sad smiley. This guide is, however, also interactive, and a click on the names of the companies provides access to more exhaustive information.

Despite this difference, the documents share a crucial discursive feature, i.e. the fact that argumentation is also advanced visually "through the choice between different uses of colour or

[51] Greenpeace, *Guide to Greener Electronics 18* (Greenpeace International, 2012), *www.greenpeace.org*.

different compositional structures".[52] Each company is associated with one colour among green, yellow and red, which are used to corroborate the ideas expressed by means of language and contribute to the creation and transfer of meaning. In the Australian guide, the happy smiley is green, the indifferent smiley is yellow, and the sad smiley is red; the association of evocative smileys with the three colours of the traffic lights incontrovertibly prove that green has a positive meaning (especially in environmental discourse, as it considered "the colour of nature"),[53] yellow refers to something incomplete or in-between, and red is used with a negative connotation. Figure 3, displaying the Italian guide, offers clearer insights into Greenpeace's use of colour. Despite their almost universally accepted connotations, a key at the bottom of the guide helps the reader understand that 'green' means 'good' ('bene'), 'yellow' means 'not enough' ('non è abbastanza') and 'red' means 'not good' ('non ci siamo'). Therefore, in addition to the shopping advice provided by means of the basic argumentative pattern, Greenpeace also resorts to a very simple and almost universal code to suggest which tuna cans consumers should or should not buy. If the reader wishes to be given more detailed information, they can click on each specific company and a dedicated box will appear providing indications on the brand's commitment, progress and setbacks. As specified in section 3, glossaries can also be accessed by further clicking on specific words in the company boxes, and the definitions of technical terms will pop up, enabling the curious consumer to acquire relevant knowledge by selecting their preferred navigation paths.

Not only colours but also pictures play a crucial role in the knowledge-dissemination process, and the most meaningful example is provided by the slogan of the campaign, 'Not Just Tuna'. This elliptical clause is used in the Italian website, as well, proving that English is often used as a lingua franca in activist campaigns, possibly to highlight the global and, therefore, shared and serious nature of environmental crises. The meaning of this clause is obscure or, rather, incomplete, because it can only be grasped by considering the whole picture in which it is inserted.

Figure 4 shows the visual argument that is put forward transnationally to raise awareness of the environmental scourge of bycatch.

[52] Kress and van Leeuwen, *Reading Images*, 2.
[53] Ibid., 269.

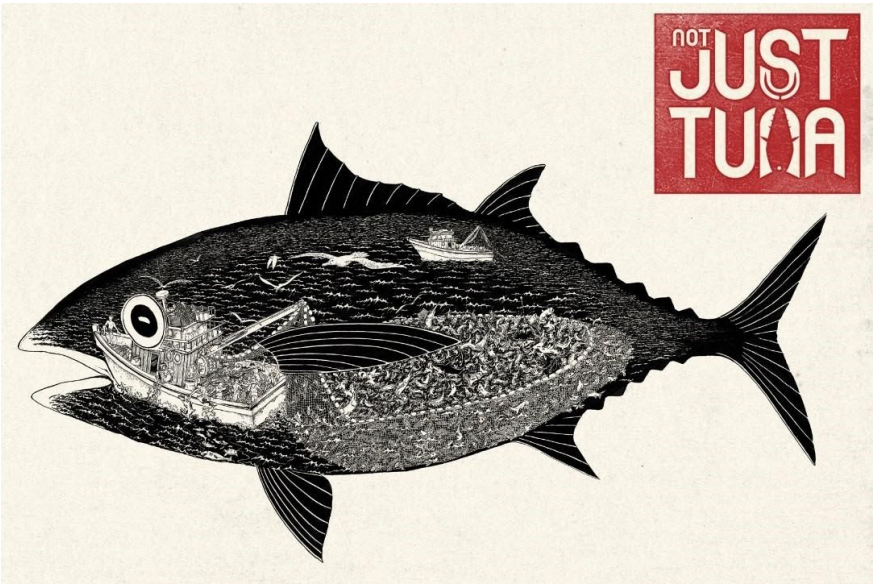



Fig. 4: Visual argument in the tuna campaign (version 1)

Understood as "image-based messages that are inherently argumentative",[54] visual arguments are frequently "exploited in activists' campaigns to try and win supporters to their causes, images having a stronger and more immediate impact than words".[55] As most visual arguments, the one shown in figure 4 "is not purely visual, but mixed, since the argumentation is both verbal and visual".[56] In addition to proposing the elliptical clause 'Not Just Tuna', it displays the picture of a tuna, 'containing' another picture that shows a purse seiner; within the seine, countless marine species battle for freedom, but their destiny seems inescapable. This brutal but realistic representation of business as usual in the tuna industry clarifies that 'not just tuna' is caught, but also other marine species, such as sharks or swordfish. The persuasive power of this argument lies in its enthymemic,[57] i.e. partially implicit, nature: if the clause is not enough to clarify the argument, by casting a glance at the picture the reader immediately understands what tuna bycatch is. Similarly, the picture could not be enough to fathom the content of the argument, but its interplay with the elliptical clause engenders a simple and vivid description of the problem at issue. In the light of its focus on the problem of wasteful bycatch, this visual argument can be said to integrate the prototypical pattern of complex problem-solving argumentation used in the three tuna guides and reconstructed in section 3. It colours, livens up and sheds light on premise 1.1a, summarised in the sentence 'There is a problem with bycatch' (see section 3) and expressed verbally in the three guides. Through the use of evocative visuals devised and drawn

[54] Degano, "Visual Arguments", 291.
[55] Ibid., 312.
[56] Frans H. van Eemeren and Bart Garssen, "Some Highlights in Recent Theorizing: An Introduction", in Frans H. van Eemeren and Bart Garssen, eds., *Topical Themes in Argumentation Theory: Twenty Exploratory Studies* (Dordrecht, Heidelberg, London, New York: Springer, 2012), 11.
[57] Reisigl, "Argumentation Analysis", 72.

by artist Aaron Staples, the argument helps the reader capture the essence and gravity of the main problem lying at the basis of the tuna crisis.

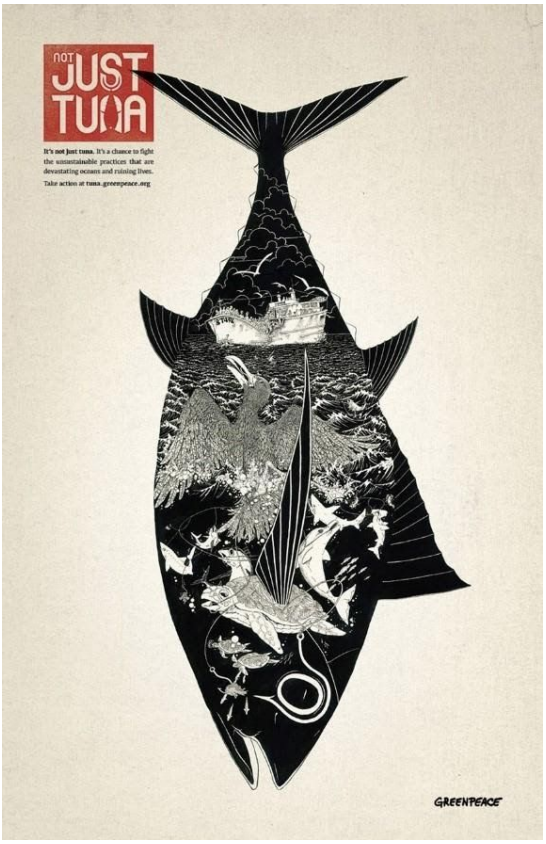



Fig. 5: Visual argument in the tuna campaign (version 2)

Figure 5 displays a second version of the picture, with seabirds, turtles, sharks and dolphins accidentally caught through longlines. This second picture, showing a different destructive fishing practice, nevertheless focuses on the inevitable outcome of the use of any of such methods, and further clarifies that the clause 'not just tuna' acts as an enthymemic argument, an incomplete argument that has "to be completed ... in the mind by inferences"[58] thanks to the explanatory power of pictures. Notably, this visual argument functioning as a knowledge dissemination device is characterised by the two main features of advertising, multimodality and succinctness,[59] and therefore acts as an advertisement, unleashing all its persuasive potential.

[58] Ibid.
[59] Paul Bruthiaux, "In a Nutshell: Persuasion in the Spatially Constrained Language of Advertising", *Language & Communication*, 20 (2000), 297-310.

## 5. Cultural Homogenisation or Cultural Specificity? A CDS Perspective

Coupled with the recourse to complex problem-solving argumentation, the use of glossaries and the practice of resorting to the ranking as a knowledge-dissemination device, the visual argument described in section 4 further points to a certain discursive uniformity in the three guides. The causes of these similarities must be sought in Greenpeace authorship and in the global nature of the tuna crisis, but also in the discursive conventions of environmental activist culture,[60] which aim at "responding to ... a variety of 'natures under threat'".[61] The results of the analysis, thus, seem to suggest a certain cultural homogenisation, understood as one of the fundamental aspects of cultural globalisation.[62] Yet, the impact of the discursive conventions of environmental activist culture on text configuration suggest the adoption of a broader, "culturally conscious and reflexive approach"[63] to discourse in order to acknowledge "the actual cultural diversity"[64] of the three tuna shopping guides.

By adopting a CDS perspective, "culture is understood holistically ... locally, and globally";[65] therefore, in the analysis of the tuna shopping guides, national culture must be acknowledged besides environmental activist culture, and sociolinguistic factors in general cannot be overlooked.[66] Indeed, American, Australian and Italian cultural specificities are only apparently stifled. Total homogenisation is, first of all, hampered by the constraints of the local markets. If it is true that canned tuna brands are assessed and ranked in all the three guides, it is also true that each guide presents the assessment of its specific American, Australian or Italian companies. For example, readers are informed about the performances of 'Wild Planet' and 'American Tuna' in the American guide, 'Fish 4 Ever' and 'John West' in the Australian guide, 'Rio Mare' and 'Nostromo' in the Italian guide. These basic topical peculiarities are enough to ensure a certain degree of discursive specificity in each text; yet, this difference among the guides is just the tip of the iceberg, because language also reveals the presence of cultural specificities, especially when language creativity[67] is resorted to for persuasive purposes. Understood as "the bending and breaking of rules that is at the heart of originality in style",[68] language creativity also lies at the heart of activist discourse, as it enables and fosters the recourse to attention-seeking devices[69] that maximise the potential reach of non-conventional and non-mainstream environmental messages.

All the guides provide examples of this tendency to 'bend and break linguistic rules', though to differing extents. For instance, the American guide shows off a creative subtitle: 'How does your can

[60] Dave Horton, "Local Environmentalism and the Internet", *Environmental Politics*, 13.4 (2004), 734-753.
[61] Dave Horton, "Green Distinctions: The Performance of Identity among Environmental Activists", *The Sociological Review*, 51 (2003), 6.
[62] Justin Ervin and Zachary A. Smith, *Globalization: a Reference Handbook* (Santa Barbara, Denver, Oxford: ABC-CLIO, 2008), 35-38.
[63] Shi-xu, "Why Do Cultural Discourse Studies? Towards a Culturally Conscious and Critical Approach to Human Discourses", *Critical Arts. South-North Cultural and Media Studies*, 26.4 (2012), 484.
[64] Ibid.
[65] Shi-xu, "Cultural Discourse Studies", 291.
[66] Ibid.
[67] Rodney H. Jones, ed., *The Routledge Handbook of Language and Creativity* (Abingdon and New York: Routledge, 2016).
[68] David Crystal, *Making Sense: The Glamorous Story of English Grammar* (Oxford: Oxford U.P., 2017), 260.
[69] Judith Munat, "Lexical Creativity", in Rodney H. Jones, ed., *The Routledge Handbook of Language and Creativity* (Abingdon and New York: Routledge, 2016), 100.

stack up?' The verb 'stack up' provides a clear picture of cans forming a pile and anticipates the linear disposition of the propositional content; when scrolling down the page, the ranking appears and it becomes clear that at the top and bottom of the ideal pile there are, respectively, the best and the worst companies. A figure of speech indicating a certain creativity in the American guide can also be found in the glossary, which is not simply named 'glossary' but 'decode the can', with a plosive consonance that seems to contribute to inviting readers to explore the guide and acquire new knowledge about the key issues of the tuna crisis.

The Australian guide, instead, urges readers to 'vote with their wallets'. The idiom means "to show what one likes and dislikes by choosing where to shop and what to buy",[70] "to express an opinion through your actions, for example by not going to a place or by deciding not to spend money";[71] notably, it is the British English version of 'to vote with one's pocketbook', 'to vote with one's dollars' or 'to vote with one's purse', typically American.[72] From a sociolinguistic point of view, since Australian English follows British English and the RP accent in many respects,[73] the use of this idiomatic expression reveals the Australian (or at least non-American) nature of this guide. The fact that British English still has some prestige in Australia is further attested by the British English spelling used in the guide, as in "Sole Mare ... should improve human rights and *labour* commitments ... improved *labelling*, but should be clearer on catch area".

The Italian guide provides another indication of the cultural specificity of these documents. The ranking of the companies is entitled 'La classifica rompiscatole'. 'Rompere le scatole' is an Italian idiom meaning to annoy, to irritate, and here it refers to Greenpeace's role in challenging and irritating canned tuna brands until they go green. The Italian guide was the first to be published and is, therefore, often quoted as a landmark achievement in other Greenpeace national websites. The text shown below is an excerpt drawn from the American website of the NGO:

> Since Greenpeace Italy's campaign to change the tuna industry's sourcing policies began in 2010 with our Italian tuna ranking *La Classifica Rompisctole* (*breaking cans*), the major brands had only taken small steps. At the end of last year, we exposed the lack of transparency in the industry's labelling practices by releasing an investigation called *The secrets of tuna: what is hidden in a tin?* At that time, no brands were offering 100 percent sustainable tinned tuna in Italy.

The author of the text is Giorgia Monti, a Greenpeace Italy activist, but it is uncertain whether the text was drafted in English or translated from Italian; in this latter case, the identity of the translator cannot be ascertained either, also considering that translation in the activist context is often carried out by non-professional translators or by activists themselves.[74] Curiously, the idiom was translated literally, 'breaking cans'. Despite preserving the denotative meaning of the word 'scatole' ('cans'), the translation is not effective, as it does not transpose the reference to the 'annoying' role played by

[70] From the Merriam-Webster Dictionary, *www.merriam-webster.com*.
[71] From the Macmillan Dictionary, *www.macmillandictionary.com*.
[72] Cambridge Dictionary, *dictionary.cambridge.org*; Longman Dictionary, *www.ldoceonline.com*.
[73] Peter Trudgill and Jean Hannah, *International English: A Guide to the Varieties of Standard English* (London and New York: Routledge, 2013), 22.
[74] Anthony Pym, "Translation Skill-sets in a Machine-translation Age", *Meta*, 58.3 (2013), 492.

Greenpeace; consequently, the connotative meaning of the Italian expression is lost, and the translation probably left the American reader stunned before the mental picture of activists destroying tuna cans for unknown reasons.

This brief and non-exhaustive analysis of creative language shows that, despite being online documents dealing with a global predicament, Greenpeace's tuna guides remain culturally-specific texts addressing specific national audiences because, as with most activist campaigns, Greenpeace's campaign against the unethical practices of some tuna brands has "allowed local autonomy within a larger international crusade".[75] The canned tuna guides, thus, pursue and achieve the most significant aim of activist discourse, namely creating "a rooted but networked sense of local belonging to a globalised green community";[76] they aim to explain and narrativise a 'global' bioethical crisis to spur 'local' action. Therefore, any attempt to consider activist discourse as a standardised product of cultural globalisation is bound to generate misunderstanding and to result in a dangerous underestimation of the need for localisation[77] in the activist context.

[75] Katrina Lacher, "Where's the Beef... From?: Boycotting Burger King to Protect Central American Rainforests", in Louis Hyman and Joseph Tohill, eds., *Shopping for Change: Consumer Activism and the Possibilities of Purchasing Power* (Ithaca and London: ILR Press, 2017), 241.
[76] Horton, "Local Environmentalism", 28.
[77] Federica Scarpa, *La traduzione specializzata: un approccio didattico professionale* (Milano: Hoepli, 2008), 293.

Paola Catenaccio

# Ethics and Legitimacy in the Discourse of Agri-biotechnology. A Study in Argumentation[1]

**Abstract**: Over the last few decades, scientific research and technology have advanced at incredible speed, creating the conditions for previously unimaginable progress in all areas of life, but at the same time raising ethical concerns often exacerbated by the rapidly spreading commercial exploitation of emerging technologies. One domain where both progress and ethical questioning have been especially strong is that of genetic engineering, which so far has reached widespread application primarily in the field of agri-biotechnologies.

While having become progressively established throughout the world, agri-biotechnologies are far from being equally accepted everywhere. Objections to them range from misgivings about their moral acceptability, to fears about their possible consequences for human health, to the perceived risk of environmental damage, to the negative socio-political implications of giving a handful of seed producers what basically amounts to a monopoly on global food production. In the face of this criticism, agri-biotechnology companies have mounted a massive counteroffensive involving a sustained, coordinated rhetorical effort.

This paper explores the argumentative strategies employed by major players in the agro-biotech sector (the like of Monsanto, now part of Bayer CropScience, Syngenta and Corteva Agriscience) in order to legitimate their operations and the technologies upon which they are based. In particular, it investigates the extent to which such argumentative strategies engage explicitly or implicitly with ethical issues, and attempts to identify recurring rhetorical structures in the self-legitimating narratives of major players in the industry. The study is rhetorical and (critical) discourse-analytical in focus and relies on pragmadialectics and the Argument Model of Topics for the analysis of argumentative patterns.

Keywords: *agri-biotechnologies*, *argumentation*, *ethics*, *legitimation*, *rhetorical strategies*

## 1. Introduction

In the last few decades of the twentieth century, unprecedented technological breakthroughs in the domain of genetics led to the development of engineering techniques which enabled the creation of new crop varieties. Starting from the late 1990s, after gaining approval from the FDA (the American authority presiding over the safety of foodstuff), genetically modified crops began to be commercially exploited, first in the US and then, progressively, in other parts of the world. Institutional support played a key role in fostering a climate favourable to the acceptance of genetically modified seeds and crops, especially in the US and in developing countries under its direct or indirect influence, for instance in South America. By contrast, in Europe the introduction of GMOs did not go quite as

[1] This study contributes to the national research programme "Knowledge dissemination across media in English: continuity and change in discourse strategies, ideologies, and epistemologies", financed by the Italian Ministry of Education, University and Research for 2017-2019 (nr. 2015TJ8ZAS).

smoothly, running into a staunch opposition which eventually led to an effective moratorium on genetically modified crops. This "regulatory polarisation", which lasts to this day, was due to multiple factors.[2] Public outrage was one of them. While such outrage was contained in the U.S., where a powerful pro-biotech coalition dominated the debate, it was much more salient in Europe, where it crucially contributed to determining a hostile political climate for GMOs. Nor was the controversy limited to the European continent; also in countries where agri-biotechnologies were taking hold (including the U.S.), a highly vocal opposition arose which succeeded (with varying degrees of success) in mobilising public opinion against the widespread use of genetically modified crops. The rise of the Internet – which began around the same time as the debate started to become salient, i.e. the late 1990s – made it possible for initially relatively marginal voices to reach multiple audiences and orchestrate highly visible anti-GMO campaigns, many of which were then picked up and amplified by mainstream media (a process which appears to continue to this day).[3]

Agri-biotech corporations reacted to the protests by launching their own campaigns. These were based on the overarching assumption that mistrust and opposition were due to a fundamental lack of understanding of the science at the heart of the new technologies. Grounded in a deficit view of the understanding of science, the campaigns set off to explain the mechanisms and principles underpinning GMOs, confident that better scientific literacy would result in greater acceptance of biotechnologies. This expectation, however, failed to materialise; if anything, the battle between biotech believers and their opponents became ever more polarised, with neither side willing to make concessions or come to a compromise.

Opposition to the agri-biotech industry is grounded in a whole array of motives. As Bernauer points out, agri-biotechnologies tap into a much broader set of concerns, many of them with evident ethical implications:

> The controversy over green biotechnologies forms part of wider ranging societal controversies over various applications of biotechnology, notably, cloning and other biotech-related reproductive technologies, stem-cell research, xenotransplantation, transgenic animals, and genetic testing. Debates over such biotech applications also tie in with more general issues, such as world trade and globalization, intellectual property rights and the patenting of life forms, the future of agriculture, poverty and hunger, and the role of science in society. All of these issues involve clashes between natural science paradigms and political measures designed to cope with uncertainty and ethics. They also involve disputes over how to balance economic competitiveness and politically legitimate and viable regulatory systems for new technologies.[4]

In the case of GMO crops, safety issues were initially paramount, and partly obfuscated ethical concerns (which were, by contrast, given much greater salience in other areas where genetic

[2] Thomas Bernauer, *Genes, Trade, and Regulation: The Seeds of Conflict in Food Biotechnology* (Princeton, New Jersey: Princeton U.P., 2003) 7 and ff.
[3] See Ke Jiang et al., "Semantic Network Analysis Reveals Opposing Online Representations of the Search Term 'GMO'", *Global Challenges*, 2 (2018).
[4] Thomas Bernauer, *Genes, Trade, and Regulation*, 4.

manipulation was beginning to be used, such as animal cloning).[5] In time, other concerns have taken over. The threat posed to biodiversity has been a key motive, with genetically modified crops having been accused – amongst other things – of reducing biodiversity by contaminating (and thus in time entirely replacing) non-GMO crops. On the social side, aggressive marketing in developing countries has raised fears that big corporation may force local communities to become dependent upon their seeds and support, thereby *de facto* blocking all attempts to experiment with alternative forms of development that may be more aligned with local values and traditions (and more respectful, it is argued, of the environment). In this respect, the rise of alternative paradigms of agricultural production, such as agro-ecology (with its explicit reference to ethics and sustainability) has been a powerful catalyst for protest. More recently, the debate has focused on one of the most popular pesticides used in combination with genetically modified seeds, i.e. glyphosate, a suspected carcinogenic agent. The legal battle on glyphosate has reignited the war against agri-biotech corporations and raised novel, even more sinister issues on an industry that has been embroiled in a legitimacy crisis practically since its inception and whose ethics has been repeatedly challenged.

Legitimacy is, indeed, a key word in the agri-biotech debate. By 'legitimacy' is here understood, following Suchman, "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions".[6] In the contemporary business environment, with its growing emphasis on the social responsibility of corporate actors, the ethical acceptability of a business is crucial. Clearly, if a business – or an industry – is believed to pose a risk to human health and the environment, or to infringe some fundamental laws of ethics (as tampering with nature may be perceived to do), its legitimacy is undermined.

Not surprisingly, the main effect of anti-GMO campaigns targeting specifically the ethics of agri-biotech has been to delegitimise the sector in general, and individual corporations in particular. Among these, Monsanto has been by far the most vilified, but by no means the only one whose reputation has suffered. In response to the activists' de-legitimising strategies, agri-business corporations have stepped up efforts to build consensus around their practices. While the focus on improving science literacy as a way to combat scepticism and opposition has persisted, in time the range of strategies deployed in the service of corporate legitimation has become broader and more varied, with a growing emphasis on values, ethics, and beneficence. The communicative approach adopted has also changed, taking on a more clearly dialogic character. The websites of the main agri-biotech companies feature sections with names such as "Conversation" (Monsanto),[7] "Transparency" (Bayer CropScience),[8] "Consumer Hub" (Corteva)[9] and often encourage the public to

[5] In their *Improving Nature? The Science and Ethics of Genetic Engineering* (Cambridge: Cambridge U.P., 1996), Michael J. Reiss and Roger Straughan offer an in-depth analysis of the relationship between risk and ethics (ibid., 52 ff). They highlight the fact that the controversy on genetic engineering was initially dominated by safety concerns (53), but insist that issues of risk and safety cannot be separated from ethical considerations.

[6] Mark C. Suchman, "Managing Legitimacy: Strategic and Institutional Approaches", *Academy of Management Review*, 20.3 (1995), 57l–610, 574.

[7] *Monsanto.com*.

[8] *Cropscience-transparency.bayer.com*.

[9] *Consumer-hub.corteva.com*.

pose questions, including challenging ones, which the companies pledge to answer openly and transparently. These initiatives have the declared purpose of fostering a less antagonistic, more open relationship both with detractors and with those who do not have strong views on the topic but who are interested in understanding it better. I have argued elsewhere that this dialogic opening is still very much governed and managed by the companies, which continue to maintain a strong hold on the information that does get discussed and often manage to impose their framing on the discussion.[10] However, it is undeniable that, on the surface at least, agri-biotech companies have been trying to reach and win over a larger audience, and that to do so they have been forced to address (and, as we shall see, occasionally circumvent) some of the key challenges and concerns which have been levelled at them.

## 2. Aim, Materials and Methodological Approach

This essay sets out to investigate the official websites of selected agri-biotech companies with a view to identifying the rhetorical and argumentative structuring of their strategies of self-legitimation. In particular, the study focuses on discursive constructions of corporate identity and/or industry ethos which address – implicitly or explicitly – key bioethical issues.

The analysis has been conducted on materials selected from the corporate website of four major players in the agri-biotech field: Monsanto (now part of Bayer CropScience, but endowed with an independent website);[11] Bayer CropScience;[12] Syngenta;[13] and Corteva Agriscience.[14] These four companies are among the major players in the agri-biotech market, which in turn has the lion's share of the world's agricultural production. All four corporations have official websites, and some of them also manage sister websites devoted to specific aspects of their business. The four main websites share the common characteristic of featuring a rather fragmented homepage displaying a multiplicity of pictorial elements accompanied by short lexias which open up an equally large number of navigating options. Along these paths, readers build at their leisure hypermodal traversals (to use Lemke's denomination)[15] through which they construct meanings across multiple media, texts and modes.

This latter point is especially relevant for the purposes of this study. While all websites feature sections devoted to the description of the company (basically, 'Who we are' sections, though their names may vary), the construction of the companies' ethos and identities is not confined to them. Rather, it spreads across the various sections of the websites (with images and videos often playing an important supporting or even framing role), and is built incrementally (and often indirectly) as one

[10] See Paola Catenaccio, "Web-mediated Stakeholder Communication in the Biotech Industry: The Discursive Construction of Dialogic Illusion", *Altre Modernità*, Special Issue on "Language and Discourse in Social Media: New Challenges, New Approaches" (October 2018), 48-63. Available at *riviste.unimi.it*.
[11] *Monsanto.com*.
[12] *Cropscience.bayer.com*.
[13] *Syngenta.com*.
[14] *Corteva.com*.
[15] See Jay Lemke, "Travels in Hypermodality", *Visual Communication,* 1.3 (2002), 299-325; "Multimedia Genres and Traversals", *Folia Linguistica*, 39.1-2 (2005), 45-56; "Multimodality, Identity and Time", in Carey Jewitt, ed., *The Routledge Handbook of Multimodal Analysis* (Abingdon: Routledge, 2009) 140-150.

reads on, with a sort of compound effect. Claims and arguments, therefore, are dispersed in the websites; their retrieval, and the reconstruction of the overarching argumentative strategy deployed in the service of self-legitimation, is an exercise in intertextual reading which requires extensive navigation guided by interlocking links.

Because of this, the materials upon which the analysis is based are of various natures and cover websites down to their second- and third-level pages, as deemed necessary. The excerpts analysed have been selected on the basis of their representativeness as judged by the analyst. As always in small-scale qualitative studies, there is a risk that examples are 'cherry-picked', thus increasing the chances of researcher bias. In order to offset this risk, the following criteria have been used in the selection of topics and materials:

(1) Salience: topics that are given visual salience in the websites (for instance because they occupy a central position in the homepage) are considered to rank higher in importance than more marginal topics. The more central the topic, the greater its relevance is assumed to be for the company.
(2) Frequency and recursivity: the same topic (for instance, sustainability) may come up in different contexts, and multiple reading paths may have a page dedicated to sustainability as their end-point; when this occurs, it may be assumed that the topic is of special importance for the company;
(3) Controversy-relatedness: the controversy around GMOs revolves around multiple issues, all of which are well known to the general public. As mentioned above, key concerns are related to human safety, environmental risk, long-term sustainability and social impact. The discursive self-legitimation of agri-biotech companies addresses all these issues, producing counterclaims which engage – either directly or indirectly – with the claims of GMO detractors, often providing extensive supporting evidence.

As for the methodological approach adopted, the analysis is conducted on two separate but interconnected levels. At a first level, the focus is on the identification of the legitimation strategies deployed in the websites. By 'legitimation strategies' I mean those discursive strategies which are deployed to construct entities as legitimate and therefore endowed with a 'license to operate', which they demonstrate "by responding to stakeholders in their local and global environment".[16] This step of the study is based on van Leeuwen's framework for the analysis of legitimation discourse,[17] which identifies four strategies typically deployed to legitimate an entity or a practice. The first part therefore discusses representative examples of such strategies retrieved from the agri-biotech websites. In the second part, attention is turned to an in-depth analysis of the way in which one of these legitimation strategies – rationalisation – is discursively constructed. Rationalisation has been selected as the focus of specific attention because of its salience as a framing device in the websites. For this step, the

[16] Anne Ellerup Nielsen, "License to Operate", in Samuel O. Idowu et al., eds., *Encyclopedia of Corporate Social Responsibility* (Berlin/Heidelberg: Springer-Verlag, 2013), 1586.
[17] Theo van Leeuwen, "Legitimation in Discourse and Communication", *Discourse & Communication*, 1.1 (2007) 91-112.

overarching theoretical framework is argumentation theory, both in its logico-dialectical and in its rhetorical dimensions. In adopting this perspective, I follow the tradition of Perelman and Olbrechts-Tyteca's *nouvelle rhetorique*[18] and other contemporary approaches to argumentation,[19] including pragmadialectics (developed by van Eemeren and his associates),[20] and – a more recent development – the Argumentum Model of Topics by Rigotti and Greco,[21] which aims to provide "a theoretical and methodological tool to analyze the inferential configuration of arguments, as supported by *loci*".[22]

A fundamental aspect of both the New Rhetoric and pragmadialectics (in tune with classical approaches, including Aristotle's) is the importance attributed to rhetoric within a reasonableness-grounded approach to argumentation. In pragmadialectics, the notion of "strategic maneuvering"[23] – an eminently rhetorical concept – was introduced to account for the effort arguers make to simultaneously pursue the dual aim "of maintaining reasonableness and achieving effectiveness".[24] The importance of *both* reasonableness *and* effectiveness in argumentation suggests that the identification and logical reconstruction of argumentative patterns and schemes – which remains a key goal of argumentation studies – must be combined with an in-depth analysis of linguistic and rhetorical aspects if an argument is to be fully understood. A linguistic analysis of this kind is also suited to the retrieval of implicit premises and assumptions in argumentative discourse. Even the simplest of organisational identity claims such as the ones made in mission statements and similar organisational genres[25] can be part of a broader argumentative action organised around key themes strategically deployed in a manner designed to be maximally effective for legitimation purposes. A discursive operation of this kind is all the more essential in the case of such a controversial sector as agri-biotechnologies. The reconstruction of the argumentative patterns underlying such identity claims, of the standpoints they defend and assumptions they are based on, and of the strategic rhetorical choices used in their presentation, makes it possible to critically analyse the logical-inferential procedures, as well as the contextual and factual elements, which are at play in the persuasion strategies at work in the texts.

Based on the above, the second part of the investigation seeks therefore to identify recurrent

[18] Chaïm Perelman and Lucie Olbrechts-Tyteca, *The New Rhetoric: A Treatise in Argumentation,* trans. by John Wilkinson and Purcell Weaver (Notre Dame/London: University of Notre Dame Press, 1969).
[19] For instance, Douglas Walton et al., *Argumentation Schemes* (Cambridge, Cambridge U.P., 2008).
[20] The pragmadialectic approach has been developed over the years in several volumes. For an overview, see Frans H. van Eemeren and Rob Grootendorst, *A Systematic Theory of Argumentation: The Pragma-dialectical Approach* (Cambridge: Cambridge U.P., 2004).
[21] Eddo Rigotti and Sara Greco, "Topics: The Argument Generator", in Rigotti et al., *Argumentation for financial communication*, ARGUMENTUM *eLearning Module*, 2006, *www.argumentum.ch* (restricted access); "Comparing the Argumentum Model of Topics to Other Contemporary Approaches to Argument Schemes: The Procedural and Material Components", *Argumentation*, 24.4 (2010), 489-512; *Inference in Argumentation A Topics-Based Approach to Argument Schemes* (Cham, Switzerland: Springer Nature Switzerland AG, 2019).
[22] Rigotti and Greco, *Inference in Argumentation*, vii.
[23] Frans H. van Eemeren, *Strategic Maneuvering in Argumentative Discourse: Extending the Pragmadialectical Theory of Argumentation* (Amsterdam/Philadelphia: John Benjamins, 2010).
[24] Ibid., 40.
[25] Bing Ran and P. Robert Duimering, "Imaging the Organization: Language Use in Organizational Identity Claims", *Journal of Business and Technical Communication*, 21.2 (April 2007), 155-187.

argumentative patterns and salient rhetorical strategies routinely used in the service of self-legitimation, analysing them against the backdrop of current and past controversies on genetically modified crops with which they dialogically engage.

## 3. Strategies of Self-legitimation

This section is based on van Leeuwen's framework for the study of legitimation in discourse and communication.[26] According to van Leeuwen, legitimation answers the question "'Why' – 'Why should we do this?' and 'Why should we do this this way'".[27] All the excerpts analysed in this essay are designed to answer – more or less directly – precisely these questions. They therefore qualify as examples of legitimising discourse, though the strategies they deploy may vary.

According to van Leeuwen, legitimation strategies fall within the following categories:

(1) Authorisation, that is, legitimation by reference to the authority of tradition, custom and law, and of persons in whom institutional authority of some kind is vested.
(2) Moral evaluation, that is, legitimation by (often very oblique) reference to value systems.
(3) Rationalisation, that is, legitimation by reference to the goals and uses of institutionalised social action, and to the knowledge society has constructed to endow them with cognitive validity.
(4) Mythopoesis, that is, legitimation conveyed through narratives whose outcomes reward legitimate actions and punish non-legitimate actions.

As van Leeuwen notes:

> these forms of legitimation can occur separately or in combination.... They can occupy the best part of specific instances of text and talk which may hardly refer to what it is that is being legitimised, or they can be thinly sprinkled across detailed descriptive or prescriptive accounts of the practices and institutions they legitimize. And they are all realized by specific linguistic resources and configurations of linguistic resources.[28]

In this section I will focus on each of the strategies independently, bearing in mind, however, that they seldom occur in isolation. Whenever more than one strategy appears to be deployed in a single text, the text will be discussed within the subsection of the strategy which appears to be salient.

### 3.1 *Authorisation*

The strategy of authorisation legitimates a given practice on the basis of some form of authority. Van Leeuwen distinguishes among several types of authority, based on custom (conformity or tradition), authority proper (personal or impersonal) and commendation (by an expert or a role model).

[26] Van Leeuwen, "Legitimation".
[27] Ibid., 93.
[28] Ibid., 92.

One of the ways in which agri-biotech companies respond to safety-related charges is by referring to regulatory frameworks, a strategy which falls within van Leeuwen's categorisation of "impersonal authority". In so doing, they invoke conformity with institutionalised procedures vested with intrinsic authority. Examples of this strategy can be found in all websites. The two excerpts quoted below are typical instantiations:

(1) Before companies can make pesticides available to farmers, these crop protection tools, including herbicides, must undergo comprehensive evaluations by regulatory authorities. In the U.S., the Environmental Protection Agency (EPA) requires all pesticides to undergo more than 100 safety studies before they are approved.

Even after regulatory authorities approve a pesticide for use, they continue to consider new information to assess the safety of registered products. And no pesticide's regulatory approval is permanent. In the U.S., the EPA routinely reviews registered products to ensure they continue to meet safety standards.

As consumers ourselves, we fully support the comprehensive and science-based processes used by the EPA and other regulatory authorities around the world to ensure these crop protection tools can be used safely, according to label directions.[29]

(2) Crop protection is one of the most highly regulated industries in the world. Development of a new product involves many steps: discovery and formulation of the product; trials and field development; toxicology – the study of the effects of the compound; environmental impacts; and final registration.

To register a new product, we must show that it is safe for workers, for the environment, for the crops that are being protected, and for the food that is eventually eaten. Sophisticated risk assessments are undertaken and approximately 30% of the cost of a new active ingredient is spent on product safety.[30]

By describing the regulatory process, highlighting its rigorousness and claiming their compliance, the companies pursue a double goal. On the one hand, they seek to reassure their stakeholders about the safety of their products; on the other, they attempt to construct and convey an ethical self by presenting themselves as willing participants in a process which requires time, energy and money. Both passages display lexical choices which emphasise rigour, accuracy and expertise. Evaluations are 'comprehensive', regulatory processes are 'comprehensive and science-based', crop protection is 'one of the most highly regulated industries in the world', and risk assessments are 'sophisticated'. The main difference between the two texts is to be found in the way the two companies choose to call the products under discussion. Monsanto openly uses 'pesticides', though it reverts to the more neutral (and opaque) 'crop protection tools' in the closing line. Syngenta, on the other hand, never mentions pesticides, preferring the wording 'crop protection'. Syngenta's is a strategic choice long enacted by the agri-biotech business: all the terms used to refer to their products are consistently positive. This has led to accusations of opacity and deliberate obfuscation, which Monsanto, in its renewed commitment to transparency, probably is trying to offset by using the (normally dispreferred) word 'pesticides'.

Another powerful source of authorisation is provided by science and scientists. The websites of all

[29] *Monsanto.com*.
[30] *Syngenta.com*.

agri-biotech companies feature sections devoted to reporting the results of scientific studies. Often these studies have been undertaken by the companies themselves with the aim to counter accusations made by detractors. The excerpts below fulfil this task: in (3), Monsanto intervenes in the glyphosate debate citing scientific research as the ground for their continued use of the pesticide; in (4), Bayer CropScience reports on a study conducted to verify the impact of pesticides used on vines on the bee population:

(3) Glyphosate is the active ingredient in Monsanto's Roundup® branded agricultural herbicides. Glyphosate has a 40-year history of safe and effective use. In evaluations spanning those four decades, the overwhelming conclusion of experts worldwide, including the Environmental Protection Agency (EPA), has been that glyphosate can be used safely.[31]

(4) The researchers of Ceapimayor carried out the field studies in Chile from September 2014 to February 2015 to find out which and how many pollinators were present in the grape farms and vineyards during the flowering period.... 'There are virtually no pollinators in the plantations', summarizes Alan Lüer. He is responsible for Public & Government Affairs and Stewardship at Bayer and Head of the Bayer Bee Care team in the Chilean Cono Sur region. 'We found a significantly higher number of them outside of the vineyards, and in greater variety, too'. Knowing that bees and other pollinators do not find grape flowers particularly attractive when the grape plantations are surrounded by sufficient, alternative pollen-rich flowers and forests, the experts conclude that if Chilean farmers have the right conditions in their fields, they can, for example, use crop protection products on their grapevines even during the flowering period without much risk of exposing bees.[32]

In both passages, the authority for the safety claims resides with 'experts'. The texts from which the excerpts are taken can be seen as examples of *argumenta ab auctoritate* (even though the description of the experiment embedded in (4) is such that the role of the expert is ancillary, rather than central) which are, however, not entirely well formed. In particular, in (3), the 'experts' referred to are not univocally identified (even though the mention of EPA provides some additional credentials); and in (4) the expert is an affiliate of the company, which is sufficient ground – for detractors at least – to challenge his authority. At any rate, neither company seems to be concerned about the possibility of a challenge, and references to the authority of scientists or, more generally, of science, are frequent in the websites.

'Tradition' is another legitimating strategy identified by Van Leeuwen. In the discourse produced by businesses which have scientific and technological innovation at their core, references to tradition as a form of authorisation may be expected to be hardly salient, or indeed applicable. However, appeals to tradition are common in explanations and justifications of genetic engineering techniques, as the example below shows:

(5) For clarification, the acronyms GM and GE (genetic engineering) are frequently used interchangeably, although they are slightly different in meaning. GM refers to a range of methods such as selection,

[31] *Monsanto.com*.
[32] *Cropscience.bayer.com*.

hybridization and induced mutation that are used to alter the genetic composition of domesticated plants and animals. GE is one type of GM that involves the intentional introduction of a targeted change in a plant, animal or microbial gene sequence to achieve a specific result. In other words, GE is an extension of GM.

As you can see from the years of research, genetically modifying a plant is nothing new. Humans have been doing it for more than 10,000 years, for good reasons.[33]

(6) Humans have been using plant breeding techniques to improve our food and crops for thousands of years. Farmers and scientists have been using traditional plant breeding to create plants that have beneficial characteristics, like drought tolerance. In the 1980s, scientists began using biotechnology, a method of transferring genes directly into a plant without the long process of trial and error. These products are called genetically modified organisms, or GMOs.[34]

In these passages – which are two of many, evenly distributed across all websites – the ultra-innovative techniques involved in genetic engineering are presented as tools which make traditional practices easier and more effective, but which do not differ in nature from time-honoured and universally accepted methods in agriculture. The persuasive tactic enacted involves minimising the distance between conventional and 'enhanced' or 'improved' agriculture, as agricultural practices based on genetic engineering are often referred to. Both participles are typically used in nominal constructions where they function as classifying, rather than qualifying premodifiers,[35] thus effectively becoming terminological units which univocally identify a given class of objects. Significantly, both lemmas encode the presupposition that that new agricultural practices and products are essentially the same as traditional ones, the difference between them being only a matter of degree, not of essence. A seed that undergoes a procedure that 'improves' it is still the same seed, but better.

Yet another source of authority are what van Leeuwen calls 'role models'. Biotech companies consistently seek – and quote – the endorsement of farmers. Excerpt (7) exemplifies this strategy, which is widespread across the websites of all companies:

(7) "Technology has played a huge part in our ability to expand production"
"We've seen over the last five years a significant leap in all field yield levels, and I think that's going to be the number-one contributor to us being able to continue to grow in our ability to expand and continue to thrive."
-Farmer[36]

To sum up, the most common examples of authorisation are references to regulatory frameworks, references to the authority of scientists (or more generally of science), and references to commendations by users, predominantly farmers. These three legitimation strategies are each valid individually, but they are even more effective when taken jointly, as they address different salient concerns in the GMO debate. References to regulatory bodies address safety concerns, as do

[33] *Corteva.com*.
[34] *Monsanto.com*.
[35] See Michael A.K. Halliday et al., *An Introduction to Functional Grammar* (London: Routledge, 2013), 39.
[36] *Corteva.com*.

references to the essentially identical nature of GMOs and traditional products. The authority of science and scientists is invoked both to claim safety and to display efficiency. Finally, farmers and other expert figures are enlisted to vouchsafe for the effectiveness of agri-biotech products.

### 3.2 *Moral evaluation and rationalisation*

In this section I discuss moral evaluation and rationalisation. The two strategies share a common grounding in ethics and morality, though they differ in the way in which they make reference to these values. In moral evaluation, values are mentioned explicitly. For instance, a company may say of itself that it strives to be a good corporate citizen, making an explicit moral statement which does not need to be qualified any further. A company can also refrain from making such an explicit claim, and say that it aims to improve people's lives by providing them with its products. This is an instance of rationalisation: moral values are not stated explicitly, but they are implied as the result of a reasoning process which ultimately attributes moral qualities to the company even though it does not so explicitly. Van Leeuwen observes that "in contemporary discourse, moralisation and rationalisation keep each other at arm's length. In the case of moral evaluation, rationality has gone underground.... In the case of rationalisation, morality remains oblique and submerged even though no rationalisation can function as legitimation without it".[37] In the case of agri-biotechnologies, moralisation and rationalisation are key strategies in the discursive construction of legitimacy. These two strategies are especially relevant for the purpose of this study because, by their very nature, they are bound to evoke ethical issues. I will consider rationalisation first, and then move from rationalisation to moralisation. It is my contention that rationalisation is used by the agri-biotech business as an overarching framework for the introduction of moralisation as a viable legitimating strategy.

(8) Innovation has never been more important
Food is the most basic human need and the engine of economic development. Yet while our world is growing, our food resources are not. As a champion of responsible agriculture, this is our challenge. Our response to the challenge is innovation.[38]

(9) Every day, our planet wakes with nearly 200,000 more mouths to feed and more farmland lost to erosion. Many people who produce the world's food are living in poverty, while biodiversity is disappearing fast. We have a plan to meet these challenges: The Good Growth Plan.
Its mission is to improve the sustainability of agriculture and our business through six commitments to be achieved by 2020.[39]

(10) Monsanto is an agricultural company, helping farmers large and small grow food more sustainably. From seed to software, to fiber and fuel, we're developing tools to help growers protect natural resources while providing nourishment to the world. In the face of a changing climate and other environmental challenges,

[37] Van Leeuwen, "Legitimation", 100.
[38] *Corteva.com*.
[39] *Syngenta.com*.

we're helping ensure our agricultural system continues to suit the needs of everyone.[40]

(11) Ten billion people require a solution

The world's population increases by three people every second. This seems like a manageable number, but in 2050, when this second's three newborns are adults, the inconceivable number of 9.7 billion people will inhabit the Earth – about one third more than today.

The question is, how will it be feasible to feed these almost ten billion people when it is already impossible to meet the current basic needs of the world's population?

Bayer's answer is sustainable agriculture.[41]

All four excerpts are built around a problem-solution pattern, where the problem has strong moral undertones, and the solution is provided by the company. In the face of 'challenges' (explicitly mentioned in three out of four excerpts) that threaten the contemporary world (be they a growing population, dwindling resources, or climate change), all companies offer a 'solution' or a way to 'meet the challenge'. All passages are remarkably similar in their deployment of rationalising strategies which provide the companies with legitimation by highlighting the moral implications of their businesses. They can therefore be seen as examples of 'instrumental rationality', i.e. of rationality that "legitimates practices by reference to their goals, uses and effects".[42]

Three aspects are worth noticing in these forms of legitimation. First, ethics is never explicitly mentioned. This is typical of rationalisation, as van Leeuwen remarks (see above), and suggests that moral/ethical values do no need to be explicitly mentioned as they are part of the shared common ground. Second, ethicality is predicated on the 'goals' or 'outcomes' of agri-biotechnology – not, technically speaking, of agri-biotechnology in itself. This means that the dimension of ethics considered is that of 'extrinsic ethics', i.e. a dimension that concerns ''ethical issues that ... are *external* to scientific practice''.[43] Intrinsic ethics – "issues [that] arise when values and ethical assumptions are embedded within scientific findings and analytical methods"[44] – does not seem to be contemplated. This approach, while obviously suited to the purpose of advancing the case for agri-biotechnologies, leaves out an entire array of issues related to the moral acceptability of genetic manipulation, which is an issue often raised in other fields of genetic engineering, but consistently

[40] *Monsanto.com*.
[41] *Cropscience.bayer.com*.
[42] Van Leeuwen, "Legitimation", 101.
[43] Erich W. Schienke et al., "Intrinsic Ethics Regarding Integrated Assessment Models for Climate Management", *Science and Engineering Ethics*, 17.3 (2011), 503-23, 505.
[44] Ibid., 503. Schienke et al. distinguish between procedural, extrinsic and intrinsic ethics as follows:
"(1) *Procedural ethics*: ethical aspects of the process of conducting scientific research and disseminating results, such as: falsification, fabrication, and plagiarism; care for subjects (human and non-human animal); responsible authorship issues; analysis and care for data; and conflicts of interests....
(2) *Extrinsic ethics*: ethical issues extrinsic to the production of scientific research, i.e. ethical issues that involve issues that are external to scientific practice. These arise, for example, when considering the impact of scientific research on society. The above include: the impact of funding on research trajectories, the effects of technological innovations on social ends such as health and wellbeing, and the role of science in policy making.
(3) *Intrinsic ethics*: ethical issues and values that are embedded in or otherwise internal to the production of scientific research and analysis. These involve ethical issues arising from, for example: the choice of certain equations, constants, and variables; analysis of data; handling of error, and degree of confidence in projections" (ibid., 505-506).

underplayed in agri-biotech discourse. Thirdly, the ethicality of the outcomes is used to make moral claims about the companies. This strategy shifts the attention from corporate practices (which are the most common target of anti-agribusiness criticism) to the end results of the implementation of agri-biotechnologies. In terms of rhetorical strategies, we see here at play an instance of what in Appraisal Theory is called 'invoked appraisal':

> With invoked appraisal, we are told something about an entity or state which is intended to elicit a particular kind of evaluative reaction, without any of the lexical items being identifiable as unambiguously evaluative.[45]

Using a generalised statement as an example, we can reconstruct the process of elicitation of positive appraisal as follows:

> Company A produces seeds and tools that are instrumental in ensuring that food security is achieved in the future.

The shared common ground here is that food security is a desirable goal. Its desirability is grounded in values that are generally acknowledged to belong to the realm of ethics – "the right thing to do".[46] The invoked appraisal is that Company A must be evaluated positively because of its role in the process described, with the positive evaluation being linked to the ethical values invoked. This evaluative process can be reconstructed with greater precision by analysing its argumentative structure. A proposal for such a reconstruction will be put forth in Section 4 below, where the various components of the argument will be discussed in detail. Suffice here to say that the rationalising strategies deployed in the websites of the four agri-biotech giants analysed, while not mentioning ethical issues explicitly, consistently evoke issues belonging to the field of ethics with a view to eliciting an evaluation of themselves and their business as ethical.

Alongside these rationalising strategies, the websites also feature morality as legitimation, though they do so to a much lesser extent, and confine morality claims to dedicated sections. Recourse to morality as a qualifying feature of an entity is common in today's business world.[47] As mentioned earlier in this essay (Section 1), reference to values has become particularly widespread since the rise around the turn of the millennium of the Corporate Social Responsibility paradigm, and there are virtually no companies nowadays which do not make some form of explicit reference to ethics and morality in their identity claims (typically in their mission statements). Agri-biotech companies are no exception, and make regular references to abstract values such as integrity, respect and transparency:

[45] Geoff Thompson and Laura Alba-Juez, *Evaluation in Context* (Amsterdam, Philadelphia: John Benjamins, 2014).

[46] I am here using the word 'ethics' in a very broad sense to indicate the area of human inquiry that aims to identify whether a given behaviour or action is right or wrong, thereby establishing socially determined rules that allow or sanction such behaviour or action. This use is widespread, as testified by the recurrence of the term in a variety of settings (ethics committee, ethical clearance, code of ethics etc.). Ethics, however, is sometimes distinguished from morality on a variety of grounds. This is not the place for a full discussion of the topic; suffice it to say that in the business world ethical behaviour is typically associated both with aspects of conduct and with more general issues of accountability in moral terms.

[47] Archie B. Carroll, "The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders", *Business Horizons*, 34 (1991) 39-48.

(12) Integrity, respect, and transparency are core values, and acting as good corporate citizens in each country where we operate is at the foundation of our work. [48]

(13) We always do what's right, maintaining high ethical standards and conducting business safely and transparently.[49]

Ethics is clearly a key point in these two excerpts, and refers to procedural aspects having to do with business conduct (Monsanto states that it always *acts* as a good corporate citizen; Corteva insists that they always *do* what's right). In both cases, the wording is fairly standard, and may equally apply to a different type of business. They do, however, recover a dimension of individual accountability in business conduct which was overlooked in the rationalisation strategies described above.

Discursive constructions that mention the company's core business may also be clearly value-based, with implicit or explicit ethical undertones. This is the case with excerpts (14) and (15) below:

(14) We are a business that helps humanity face its toughest challenge: how to feed a rising population, sustainably.[50]

(15) Bayer ForwardFarms are sustainable agriculture in practice.[51]

The ethical dimension in these passages is primarily conveyed by references to sustainability, which implies social and environmental awareness and a focus on the wellbeing of future generations – as well as being an obvious buzzword in today's business environment. Note that in (14) moralisation is added on to rationalisation, which is deployed in the first part of the quote.

Recourse to sustainability as a marker of ethicality is widespread in contemporary business discourse, especially in agri-business. In fact, despite its ubiquity, 'sustainability' is in many ways a contentious concept. Risen to popularity since the issuing of the Brundtland Report in 1987, which defined 'sustainable development' as a form of development that "seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future",[52] the term has gained momentum in the last twenty years. Its meaning, however, remains to this day largely unstable. 'Sustainability' has come to be used in business and policy discourse as a typical floating or empty signifier, i.e. a signifier which can take upon itself multiple (and often mutually contradictory) meanings. It is unquestionable that the notion of sustainability evokes eminently ethical values: claiming to be 'sustainable' is to all effects and purposes akin to claiming to be ethical. The use of the lemmas 'sustainable', 'sustainability' and 'sustainable' is therefore a way of making ethical claims, as

[48] *Monsanto.com*.
[49] *Corteva.com*.
[50] *Syngenta.com*.
[51] *Cropscience.bayer.com*.
[52] Brundtland Commission, *Report of the World Commission on Environment and Development: Our Common Future*, Transmitted to the General Assembly as an Annex to document A/42/427, Development and International Cooperation: Environment (1987), 41.

well as of reinforcing the ethical implications of the rationalising strategies enacted in other parts of the texts. Because of the contested meaning of sustainability, however, moralising strategies relying purely on sustainability claims are more easily challengeable than those grounded in rationalisation, where the logical procedural component can be more effective in commanding at least temporary alignment.

### 3.3 *Mythopoiesis*

The last legitimation strategy identified by van Leeuwen is mythopoiesis, which consists in legitimation through storytelling. This is extremely popular in the websites analysed, and is predominantly constituted by success stories involving the use of agri-biotechnology. Some of these success stories can also fit in the category of legitimation by authorisation, where the source of the authority is a role model (usually a technology savvy farmer). Often, however, endorsements of agri-biotechnologies are embedded in highly personal narratives, blogs and other forms of storytelling where scientific and technical explanations combine with a highly emotional presentational style. Excerpt (16) below is the final part of a story published on Syngenta's website. It reports on the beneficial effects experienced by a Dutch potato grower following his participation in Bayer's Forward Farming programme, which enabled him to experiment with new products aimed at reducing the environmental impact of his business. Incidentally, the programme also includes a focus on bee health, with the introduction of bee-hives on the farm. The final part of the story reads as follows:

(16) Before Roubos' working day ends, he cleans his tractor and machines. While doing this, he also has the environment in mind. Whenever Roubos fills or cleans his spraying equipment on the farm, he uses Phytobac, a simple but highly effective spray-residue management system. It prevents residues from getting into sewage systems or nearby bodies of water.

As Roubos parks his clean tractor, the evening sun sets on Het Groene Hart. It's time for him to have dinner with his wife, Eveline and their two small children Sam and Jenna. Thinking about his family, Roubos feels a big responsibility: "I'm a sixth-generation farmer, and I want the farm to exist at least for another six generations. So it's my job to farm sustainably in order to ensure the soil and water quality for the next generations".

By using Syngenta's product to clean his tractor, Roubos shows environmental awareness and responsibility, and can therefore look at the future of his family and of his business with well-deserved satisfaction and optimism.

## 4. Arguing the Ethical Self

In Section 3 I have discussed the legitimation strategies most commonly used in the agri-biotech business and outlined some of the most salient linguistic strategies deployed in their service. In this section, I will provide an argumentation-based account of key examples of rationalisation, which I consider the dominant, overarching strategy setting the tone for the construction of agri-biotech

companies as legitimate, and especially ethical, entities.

I have stressed above, following Van Leeuwen, that rationalisation requires some form of moral reference in order to function as legitimation. I have also shown that one of the ways in which rationalisation strategies operate is by evoking ethically-grounded positive evaluations which do not technically pertain to the intrinsic nature of the companies to be legitimated, but which such companies can nonetheless claim by virtue of their instrumental role in pursuing ethical goals.

The methodological framework for this part of the analysis is pragmadialectics, which is combined with the Argumentum Model of Topics and other approaches to argumentation in order to better account for key implicit aspects of the argumentation deployed.

To illustrate my point, I will refer to an extract from excerpt (10), which was briefly analysed in Section 3.2 above.

(17) We're developing tools to help growers protect natural resources while providing nourishment to the world.

Recall that, as discussed in Section 3.2, in other examples of legitimation strategies, explicit mention is made of 'challenges' or 'problems' – namely, how to feed a growing population, how to preserve natural resources and how to do both things at the same time. In these examples, agri-biotech companies are depicted as entities that play a role in solving the problems or addressing the challenges described (how to feed a growing population without depleting the earth's natural resources). Positive evaluation then ensues.

The problem-solution pattern which constitutes the backbone of the above claim is typically found in instances of what in pragmadialectics goes under the name of "pragmatic argumentation". Pragmatic argumentation is a form of causal argumentation characteristically used to recommend a certain course of action and typically has the following structure:

Standpoint: Action X should be carried out
1.1 Because: Action X leads to positive result Y
(1.1′) (And: If action X leads to a positive result such as Y it must be carried out)

A version of this scheme that highlights the problem-solution structure is the one below (adapted from Garssen)[53]

Standpoint: Product/approach X should be adopted
1.1 Because: Adoption of product/approach X solves problem Y
(1.1') (And: If product/approach X solves problem Y, it must be adopted)

[53] Bart Garssen, "The Role of Pragmatic Problem-solving Argumentation in Plenary Debate in the European Parliament", in Frans H. van Eemeren, ed., *Prototypical Argumentative Patterns: Exploring the Relationship Between Argumentative Discourse and Institutional Context* (Amsterdam, Philadelphia: John Benjamins, 2017), 31-52, 35.

where (1.1') represents a tacit assumption which all participants in the argumentative debate share. As Garssen observes:

> In pragmatic problem-solving argumentation the positive result is that a specific problem is solved. In this type of argumentation it is clear from the outset that there is a problem and that the removal of the problem is a positive thing. The speaker does not need to convince the listener that this problem exists and that the problem needs to be solved. These are in other words presuppositions that do not need any further argumentation.[54]

In the case at hand (excerpt 17 above) the only part of the argument which is explicitly encoded in the text is 1.1:

> 1.1 By adopting Monsanto's products and solutions, natural resources can be preserved and food security achieved.

The tacit assumption that a solution to the joint problems of resource depletion and persisting and likely increasing food insecurity is desirable is, of course, something nobody would challenge.

The other tacit component in this argumentative scheme is the standpoint. In pragmatic argumentation, the standpoint is typically a recommendation ('Action X should be carried out'; 'Product/approach X should be adopted'). But is this the case here?

Of course, to an extent it is: agri-biotech companies do try to make the case for genetically modified crops as a solution to the world's most pressing problems. In so far as the process of legitimation involves the industry as a whole, rather than the specific companies, they are indeed promoting agri-biotechnologies in principle. But they are also, first and foremost, promoting themselves. They are making identity claims. In other words, they are saying that they are legitimate – ethical – companies.

I have suggested above (Section 3.2) that the companies' self-ascribed ethicality is the result of invoked appraisal, i.e. a form of quality attribution which is not explicitly encoded in the language, but rather understood by the reader/interlocutor on the basis of standard inferential procedures relying on commonly shared assumptions. I will try here to provide an account of the multiple inferential procedures whereby the ethical nature of agri-biotech corporations is argued. To do so, I will reconstruct the combination of interlocking arguments which warrants the conclusion that agri-biotech companies want readers to infer.

This reconstruction is based on the Argumentum Model of Topics (AMT) proposed by Rigotti and Greco,[55] supplemented with references to classical argumentation schemes.[56] The AMT model, which builds on pragmadialectics as well as on the classical tradition or argumentation studies, revolves around the notion of *loci*, or *topoi*, i.e. "abstract structures that generate or support (depending on the theory involved) a variety of arguments in real-life argumentation"[57]. They are, in practice, argument

[54] Ibid., 35.
[55] Rigotti and Greco, *Inference*, xii.
[56] In particular, I rely on Douglas Walton et al., *Argumentation Schemes*.
[57] Rigotti and Greco, *Inference*, xii.

schemes which provide the inferential backbone upon which real-life arguments are built. One such locus is the locus from cause to effect, which establishes a relationship between a phenomenon and its cause, or between a phenomenon and its consequences. Each locus generates 'maxims', which are "inferential rules (often, though not always, formulated with an 'if... then' form)"[58] that work "as a major premise of syllogistic reasoning that is part of the inferential configuration of an argument supporting the intended standpoint".[59] For instance, a maxim derived from the locus from cause to effect may be the following:

> If an instrument reduces the cause of a problem that affects mankind [CAUSE], then that instrument helps save mankind [EFFECT].

*Loci* and 'maxims' represent the procedural-inferential aspect of argumentation – its purely logical, abstract component. Besides this, the AMT "includes a material-contextual component ..., which instantiates or anchors the locus and maxim in a specific context". The specific context includes a 'datum', i.e. the factual starting point for the argumentation, as well as an 'endoxa', i.e. a set of beliefs which work as underlying assumptions in any type of reasoning. Note that the 'endoxa' needs not be true: it just needs to be part of the interlocutors' taken-for-granted knowledge in a given argumentative discussion. The procedural-inferential component and the material contextual component are interconnected syllogistic structures that, together, "justify how the inferential configuration of arguments is established and how a standpoint is justified based on an inferential rule derived from the locus, as well as on premises that are part of the culture of the interlocutors, their context, and how they interpret it".[60]

Below is a reconstruction of the above-cited argument that agri-biotech businesses are ethical because they help solve one of mankind's biggest problems, i.e. food security. This complex argument can be split in two separate, simple arguments, followed by a third one which warrants the final claim. The first argument has as its conclusion (or standpoint, in pragmadialectic terms) the fact that agri-biotechnologies are beneficial to mankind. The second one starts from this point, which it takes as a datum, and projects the beneficence of the product (biotechnologies) onto the producer (agri-biotech companies). Finally, a third argumentative step equates the company's beneficence with ethicality.

A schematic representation of the first argument is provided below:

[58] Ibid., xiii.
[59] Ibid., xii.
[60] Ibid., xiii-xiv.

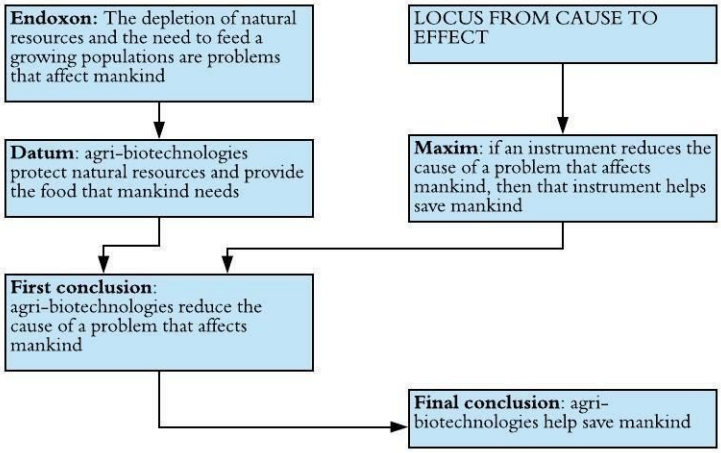



Fig. 1: AMT reconstruction or the argument supporting the standpoint that agri-biotechnologies help save mankind

In this first argument, the underlying assumption (the endoxa) is that while the world's need for food is growing, natural resources are getting depleted. This is a problem that threatens the survival of mankind, and is posited as an undisputed fact. The datum, which the companies insist on, is that agri-biotechnologies can provide enough food to feed the world while conserving resources. Relying on the locus from cause to effect, and based on the maxim that if an instrument reduces or solves a problem that affects mankind, then that instrument helps save mankind, it can be inferred that since provision of sufficient food combined with the preservation of natural resources (cause) will result in a reduction of the problem of increasing food needs and resource depletion (effect), then it can be stated that agri-biotechnologies can help save mankind.

The second argument builds on the conclusion that agri-biotechnologies help save mankind to build the case for the claim that the companies that produce them are, in a sense, mankind's saviours. I have stated earlier in this essay that the ethicality of agri-biotech companies is rarely explicitly stated, rather being typically simply invoked (i.e. it is the reader that must infer – based on the acceptance of the fact that biotechnologies are a fundamental step towards a future in which everybody has enough food and the environment is not depleted – that the companies which produce them are ethical by definition). This inferential procedure has its source in the locus from efficient cause followed by the application of an analogical scheme. One of the maxims that is typically derived from this locus from efficient cause states that if a given entity (for instance, a company) has a certain quality, then its products will have the same quality. So, if a given company is good, its products will be good. This maxim can also be reversed: if a given product is good, then the company that produces it must also be good. A version of this latter maxim is at the basis of the argument scheme supporting the standpoint that agri-biotech companies help save mankind. The datum – i.e. the contextual starting point – upon which the material-contextual component of the argumentation hinges is the claim that agri-biotechnologies – which are produced by agri-biotech companies – possess the quality of being

able to help save mankind. By applying the maxim that if a product has a certain quality, then the producer must have the same quality, it is possible to transfer the quality of "helping save mankind" from agri-biotechnologies to agri-biotech businesses. Figure 2 below illustrates the combination of the inferential schemes at play in the two interlocked arguments described so far (argument 1 has a grey background, and argument 2 a white one):

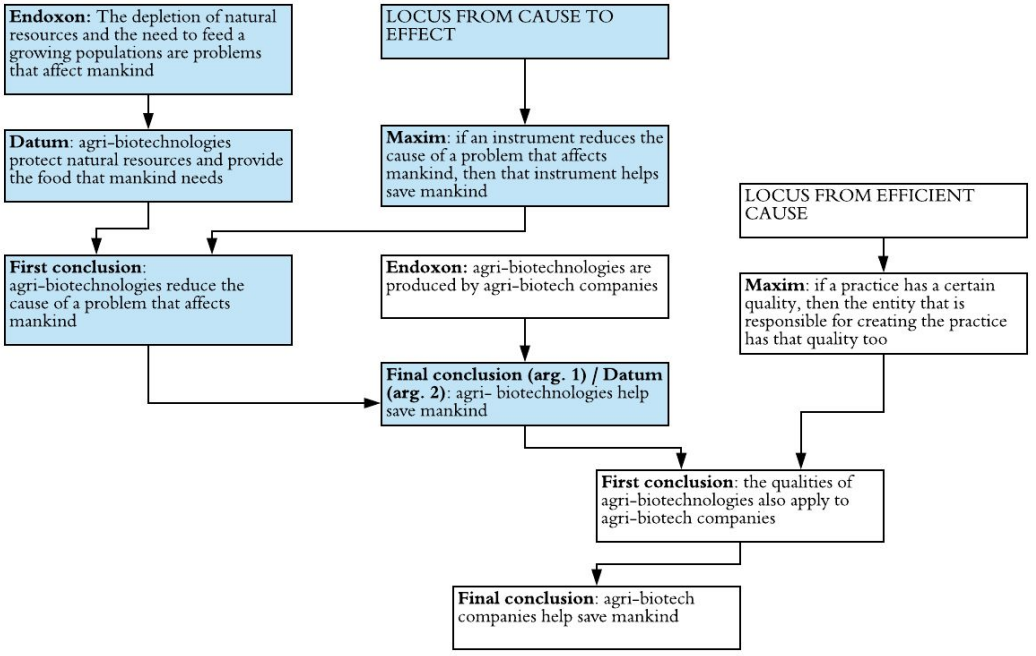



Figure 2: AMT reconstruction and combination of the two interlocked arguments supporting the standpoint that agro-biotech companies help save mankind

At this point, the inference that agri-biotech companies are ethical is only one step away. This final standpoint (which remains tacit) can be reached by means of the application of what Walton et al., based on Perelman and Olbrechts-Tyteca,[61] refer to as "Argumentation from Interaction of Act and Person", and which can be represented as follows:

*Premise 1*: Person P has done acts A
*Premise 2:* To acts 2 is attributed value V
*Conclusion*: Person P is V

If we replace 'Person P' with 'agri-biotech company X', 'acts A' with 'help save mankind' and 'value V' with 'ethical', we obtain (with a few adjustments) the following:

[61] Perelman and Olbrechts-Tyteca, *The New Rhetoric*, 296-305.

*Premise 1*: Agri-biotech company X helps save mankind
*Premise 2:* To helping save mankind is attributed the value of being ethical
*Conclusion*: Agri-biotech company X is ethical.

As the discussion above shows, the configurations of the interlocking arguments leading to the conclusion that agri-biotech companies wish us to draw are structurally complex and demand the activation of multiple inferential procedures grounded in a variety of loci and based on different maxims. Only a minimal part of the argument is explicit. Often only the datum is stated – in the case at hand, 'We're developing tools to help growers protect natural resources while providing nourishment to the world'. Yet the argumentative resources deployed in the service of self-legitimation are massive, sophisticated, and rely on powerful "objects of agreement" [62] (such as, for instance, the need to find a way to ensure food security without destroying the environment) which facilitate their unquestioned acceptance.

One final word must be devoted to the rhetorical organisation of the arguments and to the way in which such organisation contributes to advancing them. To this purpose, consider again the wording of the complex argument whose structure has been outlined above:

(17a) We're developing tools to help growers protect natural resources while providing nourishment to the world.[63]

The sentence is only apparently a description of Monsanto's business, although it starts off as such ('We're *developing* tools'), with the company presented as the Actor in a proposition which hinges on a verb of material process typically used in the description of the activities of companies whose core business involves research as well as manufacturing. The passage is characterised by a complex structure characterised by multiple subjects-agents ('*we* are developing *tools* that help *growers* protect...'). The structure discursively creates a set of interlocked responsibilities and benefits, with Monsanto investing farmers with agency but retaining the credit for the outcome (it is Monsanto that creates the conditions for effective environmental stewardship). It also exploits the principle of end-focus, which states that "it is common to process information in a message so as to achieve a linear presentation from low to high information value",[64] in order to encourage readers to focus their attention on the last part of the sentence. This also has the effect of enhancing what Perelman and Olbrechts-Tyteca call the "presence" of this part, by displaying "elements on which the speaker wishes to center attention in order that they may occupy the foreground of the hearer's consciousness".[65]

The focal point of the entire passage – the one to which the greatest salience is given, and which therefore has the most prominent 'presence' – revolves around two joint dependant clauses: a) 'protect natural resources'; and b) 'provid[e] nourishment to the world'. These are, as mentioned above, strong

[62] Ibidem, 67 ff.
[63] Monsanto.com.
[64] Randolph Quirk' et al., *A Comprehensive Grammar of the English Language* (London: Longman, 1985), 1357.
[65] Perelman and Olbrechts-Tyteca, *The New Rhetoric*, 142.

objects of agreement: that the world population is growing exponentially is commonly accepted, and that people need food is also undisputable. Equally commonplace is that the Earth's resources are getting depleted by the day, and that no solution for this seems to be readily available at the moment. The connector used to conjoin the two dependent clauses is 'while', which indicates simultaneity, but also cues a form of concession, i.e. it indicates an "assessment of contrast and unexpected relation between propositions".[66] This contrast is due to the fact that the commonly assumed relationship between the two propositions is one of negative causality: one would expect that increasing agricultural production to achieve food security demands that natural resources be exploited to the full, thereby leading to their further depletion.[67] By converse, maintaining natural resources intact is often assumed to be an obstacle to the improvement of the agricultural productivity which would be needed in order to achieve food security. That both resource protection and food security can be simultaneously achieved goes counter to commonly held beliefs, and since both goals are highly desirable, as well as ethical by definition, their concurrent attainment carries a strongly positive evaluation, with the unexpectedness of the result acting as a powerful booster.

By choosing strong objects of agreement and presenting them in a way which makes them cognitively prominent in the readers' minds, the company strategically manoeuvres readers to align themselves with its position and follow through with its line of reasoning to the desired conclusion. Moreover, recourse to a syntactic structuring which emphasises the extraordinary power of agri-biotechnologies to not only solve mankind's problems, but also do so in a way that benefits, rather than exploits, the environment, strengthens the persuasive power of the argument and adds an additional boost to the corporate ethos of the companies involved. However, a demonstration of the way in which such extraordinary feat is achieved is not provided in the immediate proximity of the claim. While such demonstrations do appear in other sections of the website, they are not contiguous to the main claim and are, therefore, not as effective in supporting it, leading to an overall weakening of the argumentation. This is a common problem in hypertextual argumentation,[68] and one that is likely to be exacerbated by the need to select a primary line of defence when the attacks are on many fronts – as is the case with agri-biotechnologies.

## 5. Conclusions

In this paper I have discussed the legitimation strategies deployed by agri-biotech businesses in their websites. By means of a qualitative analysis of the materials retrieved from them, I have shown that through recourse to the legitimation strategy of authorisation agri-biotech companies discursively construct for themselves an ethos as reliable companies: references to rules and regulation, scientific procedures, traditions, and testimonies by parties invested with authority help convey an idea of

[66] Mika Shindo, *Semantic Extension, Subjectification, and Verbalization* (Lanam, Maryland: The University Press of America, 2009), 92.
[67] A further implicit assumption is that industrial methods of agricultural production (of which agri-biotechnologies are prime examples) are especially prone to depleting natural resources.
[68] See Chiara Degano, "Argumentative Genres on the Web. The Case of two NGO Campaigns", in Sandra Campagna et al., eds., *Evolving Genres in Web-mediated Communication* (Bern: Peter Lang, 2012), 97-124.

efficiency and expertise. These strategies are extensively exploited, and are further supported by mythopoiesis. However, they are ancillary to the main identity claim that all companies make, which is that they are ethical entities with an eminently ethical mission.

The ethical nature of biotech companies is constructed by means of rationalising strategies. These strategies are built around factual data (for instance, "the world population is growing exponentially and current agricultural production cannot keep up with it" and "biotechnologies improve agricultural yield") which trigger complex inferential processes ultimately leading to the attribution of positive qualities – first and foremost ethicality – to the companies involved.

I have also suggested that the kind of ethics implicitly referred to or inferentially evoked in the website texts is almost invariably 'extrinsic' ethics. Arguments in favour of biotechnologies are based on their presumed beneficence for mankind and the environment: they produce desirable, ethically valid results, hence they are worth supporting. By the same token, the inference of the ethicality of the companies is based on the (supposedly) demonstrated ethical nature of the technologies they develop.

As the analysis of one of such overarching arguments has shown, much of this argumentative work lies hidden behind the surface of the texts analysed. Premises, assumptions, and even conclusions are often left implicit and buried deep down in the argumentative configuration of the texts. This makes it more difficult, for potential opponents, to ask the critical questions which may be asked in a standard critical discussion. For instance, the pragmatic argumentation that agri-biotechnologies should be embraced because they make it possible to increase agricultural production may well be challenged by asking whether there might not be better means to achieve the same desired effect. In fact, the very existence of competing paradigms of agricultural productions (such as agro-ecology) claiming to be able to achieve exactly the same aim suggests that this critical question is indeed topical.

Reconstructing the argumentative configuration of the self-legitimating discourse of contested companies makes it possible to identify with greater clarity the assumptions underpinning it, and to establish to what extent the nodal points of the debate are addressed in it. It is in the nature of argumentation that an arguer selects those topics which are more likely to advance their position. However, failing to address issues that have been raised by the opponents weakens an arguer's position and reduces their persuasiveness. Thus, claims to ethicality grounded in arguments which fail to address some of the critical questions typically posed by opponents are bound to be found unconvincing by skeptical or differently-minded interlocutors.

It may well be that contrasting positions in the GMO debate are so entrenched that little can be done to find some form of convergence or compromise. Nonetheless, analyses such as the one carried out in this essay may contribute to a better understanding of communicative pitfalls in existing debates and suggest possible ways of overcoming them.

Roxanne Barbara Doerr

# Dual Loyalties and Shifting (Bio)ethical Principles. An Analysis of the Defense Health Board's Ethical Guidelines and Practices[1]

**Abstract**: Since the Nuremberg Military Tribunals and the Belmont Report, the military environment has been a testing ground for scientific research and for increasingly urgent ethical debates regarding the multifaceted legal status of various military and non-military physicians and patients. In particular, military medical physicians, who work in complicated situations and environments - ranging from combat to humanitarian zones - could be called upon to make life-changing and potentially controversial decisions with significant bioethical implications. Because this category of health professionals pertains to military institutions, it is positioned along the blurred line between the Hippocratic aspirations and safeguarding of medical practice and the requirements of military culture. From a linguistic perspective, these professionals adhere to military communication and its specific language, genres and means of knowledge dissemination, thus calling discourses of power into play. Therefore, to investigate how the military community defines and disseminates information on the activity of its medical professionals, as well as face possible bioethical conflicts and challenges, the Defense Health Board's 2015 *Ethical Guidelines and Practices for US Military Medical Professionals* will be analyzed based on a Critical Discourse Analysis approach sustained by qualitative data, thus underlining the clear contrast between civilian and military communicative patterns, medical practices and founding principles, which reflect military and non-military cultural differences.

Keywords: *bioethics*, *critical discourse analysis*, *medical ethical guidelines*, *military discourse*, *military medical ethics*

## 1. Introduction: The Military and Bioethics

Since the end of the Nuremberg Military Tribunals in 1947, which led to the founding principles of modern bioethics,[2] the 1974 Federal framework governing human subjects research, and the introduction of the *Ethical Principles and Guidelines for the Protection of Human Subjects of Research* (known as the *Belmont Report*) in 1978, the military environment has always represented a starting point and a testing ground for scientific and medical research on ethics and bioethics. In addition, it contributed to important debates in 1991, the year of the 'Common Rule' for the protection of research subjects through means such as informed consent, reviews by the Institutional Review Board and institutional assurances of compliance with federal policies and the beginning of consideration for 'vulnerable populations' like pregnant women, children, fetuses, neonates and prisoners.

[1] This study contributes to the national research program "Knowledge dissemination across media in English: continuity and change in discourse strategies, ideologies, and epistemologies", financed by the Italian Ministry of Education, University and Research for 2017-2019 (nr. 2015TJ8ZAS).

[2] Mark A. Rothstein, "The Role of Law in the Development of American Bioethics", *J. Int'l de Bioéthique*, 20 (2010), 73-84.

There is, however, a blurred line between the aspirations of medical research and the issues and limits of medical practice in the military context (e.g. physical and cognitive enhancements, off-label and non FDA-approved uses of medication). While DoD (Department of Defense) directives attempt to provide additional safeguards, other institutions provide exceptions for these forms of protection in relation to operational tests and evaluation, off-label use of medication and informed consent waivers.[3] In truth, soldiers have limited rights when it comes to certain decisions regarding collective treatment and disclosure of information, as well as the possibility of seeking legal redressal for medical conditions resulting from their adherence to orders from superiors (e.g. the Feres Doctrine, the case of the 'Gulf War Illness' in the 1990s and the 1998 DoD vaccine anthrax immunization program).[4] This is probably due to the fact that there is no framework "to guide the military in how it should treat its own personnel"[5] due to military justice's "commander-centric"[6] approach, which leaves discretionary decision-making power to higher ranking figures in the chain of command.

The legal standing of military health care has become even more of an international concern as a result of the war on terrorism and the involvement of new, unforeseen legal subjects like terrorist prisoners of war who do not abide to traditional rules of engagement.[7] The foundational importance of the military in the field of bioethics is further confirmed by discussions on the necessity of revising the principles of bioethics in relation to "the use of military personnel as research subjects; the deployment use of biomedical agents; and the obligations of military physicians towards their own troops".[8] For instance, instead of beneficence, autonomy, justice, and nonmaleficence, Mehlman and Corley advocate proportionality, paternalism and fairness, which are more in line with military values but still uphold standards for service members' and civilians' well-being. Moreover, the military values that are advocated in the literature, the DoD, and the individual military branches, foresee that

[3] Efthimios Parasidis, "Emerging Military Technologies: Balancing Medical Ethics and National Security", *Case Western Reserve Journal of International Law*, 47.1 (2015), 167-183, 172-173.

[4] The Feres doctrine, which was overturned in 2019 after almost seven decades, prohibited military service members from suing the government over medical malpractice. The 'Gulf War Illness', also known as the 'Gulf War Syndrome', is a chronic and multi-symptomatic disorder that affected many returning military veterans who took part in the Persian Gulf War in the 1990's and was due to their exposure to pyridostigmine bromide, a substance used as a pretreatment to protect against nerve agent effects. Finally, the 'anthrax vaccine immunization program' was enacted and made mandatory by the Clinton administration to immunize military personnel and affiliated civilians who were deployed in combat zones against the anthrax threat even though the vaccine had not completely undergone the standard FDA approval procedure. This led to petitions and injunctions that resulted in a 2004 ruling that required the DoD to allow service members to choose whether to be vaccinated under an informed policy unless the president decided to bypass this requirement by means of an executive order.

[5] Maxwell J. Mehlman and Stephanie O. Corley, "A Framework for Military Bioethics", *Journal of Military Ethics*, 13.331 (2015), 2, *ssrn.com*.

[6] Eugene R. Fidell, *Military Justice: A Very Short Introduction* (Oxford: Oxford U.P., 2016), 9.

[7] Jonathan D. Moreno, ed., *In the Wake of Terror: Medicine and Morality in a Time of Crisis* (Cambridge, Massachusetts: The MIT Press, 2003); Jonathan D. Moreno, "Embracing Military Medical Ethics", *The American Journal of Bioethics*, 8.2 (2008), 1-2; George J. Annas, "Military Medical Ethics: Physician First, Last, Always", *New England Journal of Medicine*, 359 (2008), 1087-1090; Jed Adam Gross, "Caring for and about Enemy Injured", *The American Journal of Bioethics*, 8.2 (2008), 23-27; George J. Annas and Sondra S. Crosby, "Post-9/11 Torture at CIA 'Black Sites' – Physicians and Lawyers Working Together", *New England Journal of Medicine*, 372.24 (2015), 2279-2281.

[8] Mehlman and Corley, "A Framework for Military Bioethics", 3.

> the core military values relevant to bioethics are selflessness, the duty to obey orders, accountability, and the obligation to look out for the welfare of one's subordinates. The contrast between these values and the values that hold sway in civilian life of individualism, equality, self-rule, and freedom of action ... shows how the principles that govern civilian bioethics are not suited to the military.[9]

This distinction in principles and values is especially relevant when considering situations and discourses in which military and civilian values clash and, as will be expounded in the present study, even more so for military medical practitioners who are ruled by both. From a linguistic perspective, the military context is relevant within the discourse of bioethics, especially as far as power is concerned,[10] in that "in determining the nature of professional obligations, both the CIA and Department of Defense reframed the duty of non-maleficence into a duty only to obey the law".[11] This arbitral determination is addressed and contested in the *Ethical Guidelines and Practices for U.S. Military Medical Professionals*,[12] requested by the Assistant Secretary of Defense for Health Affairs ASD(HA) in 2011 and presented by the Defense Health Board (DHB) in January 2013. The aim of the pre-decisional draft of the guidelines, which will constitute the data set for the present study, is to clearly reframe and review the challenges stemming from military health professionals' dual roles as military officers and medical providers in problematic (bio)ethical matters, starting from the following two questions:

> 1) How can military medical professionals most appropriately balance their obligations to their patients against their obligations as military officers to help commanders maintain military readiness?
>
> 2) How much latitude should military medical professionals be given to refuse participation in medical procedures or request excusal from military operations with which they have ethical reservations or disagreement? (EGP: 2)

In light of this, the most urgent matters concern military health care professionals' role and protocol of reference for circumstances concerning problematic bioethical issues, rather than the outlining of the circumstances themselves or the discussion of the principles of bioethics in military medicine. Such a focus on people underlies the predominance of agency in discursive and linguistic terms, and the present study demonstrates that this occurs in different ways and to different degrees based on the institutional perspective.

The presentation of the pre-decisional draft of the *Guidelines* analyzed here took place in February 2015, but there have been no announcements or steps to implement the document's proposals since then due to the change in presidential administration. Because this document presents preliminary

[9] Mehlman and Corley, "A Framework for Military Bioethics", 7.
[10] Norman Fairclough, *Analysing Discourse: Textual Research for Social Research* (New York: Routledge, 2003); Jeffrey P. Bishop and Fabrice Jotterland, "Bioethics as Biopolitics", *Journal of Medicine and Philosophy*, 31 (2006), 205-212.
[11] Leonard S. Rubenstein, Scott A. Allen and Phyllis A. Guze, "Advancing Medical Professionalism in US Military Detainee Treatment", *PLosMed*, 13.1 (2016), 1-7, 2-3.
[12] The document may be found at: *apps.dtic.mil*. From this point on, all references to the document will be indicated as *Guidelines* within the text and as EGP in the quoted excerpts.

proposals for matters with vital consequences from procedural and bioethical perspectives, its disregard represents a missed opportunity to address such unsolved issues. Moreover, to the author's knowledge, there has been no further research on the document. However, as the present study argues, another implicit reason for this may lie in the inherent linguistic and discursive ambiguities and divergences between the two fields of ethics, i.e. medical and military, that are juxtaposed in the document with the supposed intent of negotiating a common ground to regulate medical professionals' actions and practices when ethical and bioethical principles are at stake. For this reason, the document will be explored in its entirety on a macro-structural level to highlight the innovativeness of its proposed aim (RQ1), and then on micro-structural level to investigate into the peculiar role and challenges of military health care professionals (RQ2), and to verify whether there is a true discursive and argumentative balance between civilian and military medical ethics (RQ3).

## 2. Data Set and Methodology

The starting point of the data set from which the present inquiry stems consists in the document by the Defense Health Board (DHB) entitled *Ethical Guidelines and Practices for U.S. Military Medical Professionals* (word tokens: 40244; word types: 3772), which was reduced by excluding non-discursive sections like the Table of Contents, list of Board Members, Reference sections and Appendixes (thus amounting to word tokens: 29643; word types: 3089).

The present study will analyze the *Guidelines* by considering three research questions that range from conceptual to linguistic. In order to highlight the relevance of the document for discussions on bioethical issues and cultures, the first research question is framed as follows:

*RQ1: What is innovative about these guidelines in the discussion on medical ethics and bioethics in civilian and military cultures?*

From a conceptual perspective, the *Guidelines* point out that the "DoD does not have an enterprise-wide, formal, integrated infrastructure to systematically build, support, sustain, and promote an evolving ethical culture within the military health care environment" (EGP: 58). There is therefore a gap due to the complexity of the military health care environment and its implications for professionals and procedures. The document outlines and addresses the latter in an attempt to better blend civilian and military medical cultures and approaches in view of the problematic situations that increasingly arise in current and ongoing international military missions.

From a macro-level perspective, the *Guidelines* are divided into the following macro-sections which, at a first glance, convey a sense of balance between military ethics and civilian (medical) ethics:

Executive Summary

1. Introduction
2. Principles and Practice of Medical Ethics
3. Principles and Practice of Military Ethics
4. Ethical Issues in Military Medical Settings
5. Ethics Education and Training
6. Conclusion: The Need for a Systems Approach to Military Medical Ethics Preparation and Practice

Appendixes

Upon observing the document in its entirety, it is possible to notice that the text displays a significant degree of interdiscursivity, given by the presence of a variety of genres and formats[13] including records of historical events, narrative descriptions of current military medical ethics, definitions and summaries of theories and regulations, case studies and examples, argumentative considerations that are repeated in the findings/recommendations pairings of each section, as well as references and the appendixes (consisting in the letter of request of the ASD(HA) for the Guidelines to the DHB (A), the Guidelines' Terms of Reference (B), the minutes of the Meetings and Briefings that were organized to discuss and decide on the content of the Guidelines (C), Fundamental Ethical Theories and Excerpts from Selected Codes of Ethics (D), a list of acronyms (E), and Names and titles of the members of the support staff (F)). The appendixes make the document easier for non-experts to understand its content but were excluded from the micro-level analysis in sections 3 and 4 in order to focus the data set on the discursive and argumentative parts that actively discuss bioethical principles and procedures.

In order to inquire into the cultural background and discourse of military and civilian medical ethics, and therefore into their relation in terms of power, the present study adopted the methodological framework of Critical Discourse Analysis with the support of data that leads it to tend towards the CADS methodology.[14] Such an approach united a qualitative analysis of the document, based on the discursive and linguistic tools provided by Critical Discourse Analysis[15] and its observation of cultural and linguistic displays of power,[16] with a quantitative and empirical analysis by means of the AntConc 3.5.6. software.[17] This enabled the retrieval and observation of relevant occurrences and collocations in relation to three important issues: the position of military medical

[13] Fairclough, *Analysing Discourse: Textual Research for Social Research.*

[14] Alan Partington, "Corpora and Discourse, a Most Congruous Beast", in Alan Partington et al., eds., *Corpora and Discourse* (Bern: Peter Lang, 2004), 11-20; Giuliana Garzone and Francesca Santulli, "What Can Corpus Linguistics Do for Critical Discourse Analysis?", in Alan Partington et al., eds., *Corpora and Discourse*, 352-368.

[15] Lia Chouliaraki and Norman Fairclough, eds., *Discourse in Late Modernity: Rethinking Critical Discourse Analysis* (Edinburgh: Edinburgh U.P., 1999); Teun A. van Dijk, "The Discourse-knowledge Interface", in Gilbert Weiss and Ruth Wodak, eds., *Multidisciplinary CDA* (London: Longman, 2003), 85-109.

[16] Norman Fairclough, *Critical Discourse Analysis: The Critical Study of Language* (London: Longman, 1995); Norman Fairclough, *Language and Power, 2nd edition* (Harlow: Pearson, 2001).

[17] Anthony, Laurence, *AntConc*, Version 3.5.6 [Computer Software] (Tokyo, Japan: Waseda University, 2018), *www.laurenceanthony.net*.

physicians, balance – or lack thereof – in the military and civilian medical ethics sections of the *Guidelines*, and possible linguistic and discursive strategies that could improve the overall communicative efficacy of the document. Although the document is short, the quantitative analysis was necessary to gain clarity in face of a marked repetition of expressions indicating obligation, values and more or less technical terms. Furthermore, it confirmed and complemented the in-depth discursive analysis with empirical data and further information on patterns, thus permitting a more complete and objective pragmatic interpretation of the findings.

After having investigated the overall structure of the *Guidelines*, the following paragraph will focus on the "Executive Summary" and "Introduction" chapters to face the second research question:

*RQ2: How is the position of military medical professionals framed in the Guidelines?*

Such a definition is essential due to the *Guidelines'* intent to present the anomalous professional position of military medical practitioners who are divided between two jurisdictions and roles, i.e. military and medical, but are more strongly bound to the rules and regulations of the former. In the ongoing development of warfare and consequent management of medical situations with ethical and bioethical implications, however, change or greater flexibility may be necessary. Section 3 will analyze the parts of the document outlining duties and responsibilities and how this could impact on their ethically significant decisions.

After examining the professionals' hybrid roles, section 4 will focus on answering the third and final research question:

*RQ3: Are the sections of the Guidelines on civilian and military medical ethics presented in a quantitatively and qualitatively balanced manner and using the same discursive and linguistic strategies?*

This question verifies the discursive and argumentative balance – or lack thereof – in the presentation of military and civilian medical practices and protocols in relation to emergency circumstances requiring ethical and bioethical attention. Such analyses focus on topics and perspectives, as well as the linguistic choices and strategies in the sections of the *Guidelines* dedicated to and seen from military and civilian points of view. More specifically, it will inquire into references to concepts that are fundamental in ethically and bioethically relevant decisions such as morality, conscience, discretion, obligation, as well as distinctive metaphors, markers of indexicality, and the use of technical terms in the sections of the documents related to military and civilian medical ethics.

The fifth and final section will summarize the most relevant findings with a twofold purpose: attempting to explain why the document was not ultimately implemented, and considering possible changes that could lead to the document's enhanced dialogical power.

## 3. Role of Military Medical Health Care Providers

The second research question was phrased as follows: *RQ2: How is the position of military medical professionals framed in the Guidelines?* and entails the close reading of the "Executive summary" and first chapter ("Introduction") of the document by specifying that:

> There are unique challenges faced by military medical professionals in their dual hatted positions as a military officer and a medical provider. Such positions require them to balance and prioritize their role as an officer in the military, and their role as a medical professional with ethical responsibilities to their patients. (*EGP*: 2)[18]

Military medical physicians are distinguished by their "dual loyalty"[19] in issues such as confidentiality, informed consent, and autonomy, which may become problematic when they clash with national security or organizational well-being.[20] These highly specialized medical practitioners find themselves in a singular situation because they must face a series of challenges that stem from the military context and its values. Such challenges may be divided into:

> clinical (patient rights in the military, experimentation, investigational drugs, medically engineered enhancement drugs, machine-brain interface, neural prostheses, genetic engineering, mechanical cybernetic improvements) and non-clinical (employment of medical workers in weapons development using advances in pharmacology, neurophysiology and genetics).[21]

For instance, decisions on whether to send an injured service member back into combat or not may be based more on the order: "to conserve the fighting force"[22] during critical situations or on the principles of military necessity and salvage[23] than on the injured soldier's individual medical needs. Moreover, the emergency contexts that have emerged in recent times encompass issues such as resource allocation, triage and detainee treatment (interrogation, torture, treatment, triage), as well as medical humanism. This is especially important considering the ongoing war on terrorism, which raises further complicated questions such as whether these new situations and subjects fall– or should fall – under the 1949 Geneva Convention or other international human rights agreements. Such debate

[18] All of the underlining in the quoted excerpts is the author's.
[19] Laura L. Sessums et al., "Ethical Practice under Fire: Deployed Physicians in the War on Terrorism", *Military Medicine*, 174 (2009), 441-447.
[20] Michael L. Gross, "Military Medical Ethics: A Review of the Literature and a Call to Arms", *Cambridge Quarterly of Healthcare Ethics*, 22 (2013), 92-109.
[21] Gross, "Military Medical Ethics: A Review of the Literature and a Call to Arms", 92.
[22] Parasidis, "Emerging Military Technologies: Balancing Medical Ethics and National Security", 168.
[23] Gina D. Bien, Lisa M. Kinoshita, and Allyson C. Rosen, "Need Versus Salvage: A Healthcare Professional's Perspective", *The American Journal of Bioethics*, 8.2 (2008), 21-23; Jason Gatliff, "Principle of Salvage: A Mischaracterization of Military Medicine", *The American Journal of Bioethics*, 8.2 (2008), 17-18; Michael L. Gross, "Why Treat the Wounded? Warrior Care, Military Salvage and National Health", *The American Journal of Bioethics*, 8.2 (2008), 3-12; Michael L. Gross, "Response to Open Peer Commentaries on 'Why Treat the Wounded?'", *The American Journal of Bioethics*, 8.2 (2008), W1-W3.

on consolidated military protocol has led to a mistrustful intellectual climate in recent times[24] and the resulting need, addressed by the *Guidelines*, to provide a framework of reference for this category of physicians. They are, in fact, in a position– or better yet, in a conceptual, professional, and discursive 'juxtaposition'– between medical and military ethics:

> As a health care provider, the professional is obligated to preserve life, attend the sick and wounded, and minimize suffering, even on behalf of the enemy. On the other hand, the health care professional, as a Service member, is obligated to support the mission, maintain military readiness, and support military operations. (EGP: 2-3)

When considering common classifications of cultural dimensions such as Hofstede's, the military community and its communication and interaction patterns, as opposed to civilians, rank high in 'collectivism' and 'high power distance'.[25] Rank disparity and peer pressure therefore have a significant impact on a service member's and a military medical professional's obedience to orders and accountability. This is clear upon analyzing the "double oath" that military medical professionals have to take before officially entering the profession, i.e. an oath to the branch of military services they have decided to serve, and the Hippocratic Oath that all physicians must swear by. Significantly, both texts are explicitly cited in the *Guidelines*:

> (1) I, _____, having been appointed an officer in the Army of the United States, as indicated above in the grade of ____ do solemnly swear (or affirm) that I will support and defend the Constitution of the United States against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties of the office upon which I am about to enter; So help me God. (Department of the Army Form 71, July 1999, for officers; EGP: 1).

> (2) I will apply, for the benefit of the sick, all measures which are required, avoiding those twin traps of overtreatment and therapeutic nihilism. I will remember that there is art to medicine as well as science, and that warmth, sympathy, and understanding may outweigh the surgeon's knife or the chemist's drug. ... I will remember that I remain a member of society, with special obligations to all my fellow human beings, those sound of mind as well as the infirm. (Modern Hippocratic Oath, in part.; EGP: 1)

[24] Kendra L. Scroggs, *Identification of Bioethical Dilemmas, Ethical Reasoning, and Decision-making in Military Emergency Medicine Departments* (unpublished dissertation, 2000), available at *www.dtic.mil*; Edmund G. Howe, "Dilemmas in Military Medical Ethics since 9/11", *Kenneth Institute of Ethics Journal*, 13.2 (2003), 175-188; Gross, "Military Medical Ethics: A Review of the Literature and a Call to Arms".

[25] Robert L. Ivie, "Foreword: Telling the Stories of the War State", in Erin Sahlstein Parcell, ed. , *A Communication Perspective on the Military: Interactions, Messages and Discourses* (New York: Peter Lang Publishing, 2015), xi-xiii; Takim Ajom Okongor, "A Lexico-Semantic Analysis of Military Language", *International Journal of Humanities and Cultural Studies*, 2.3 (2015), 652-664; Roxanne Barbara Doerr, "The Scholarly Soldier: Distinguishing Features of Online Military Academic Journals", in Stefania M. Maci and Michele Sala, eds., *Representing and Redefining Specialised Knowledge: Variety in LSP*, Cerlis Series, Vol. 8 (Bergamo: University of Bergamo, 2019).

A qualitative, Critical Discourse Analysis of these excerpts of the oaths sheds light on a relevant difference in the force of such obligations based on disparity of power: the underlined lexical choices in (1) highlight the connotative and semantic strength of the previously mentioned military core values of selflessness, duty to obey, and accountability. On the other hand, (2) appeals to the aspiring professional's discretion and core values as an individual human being as much as, or even more than, a professional. The military physician's decision making process must therefore go beyond profession and country and consider all "fellow human beings", including soldiers, allies, injured enemies (prisoners of war and others), freedom fighters, and civilians,[26] as patients regardless of the commander's orders.

## 4. (Un)balance between Medical and Military Spheres

To address *RQ3: Are the sections of the Guidelines on civilian and military medical ethics presented in a quantitatively and qualitatively balanced manner and using the same discursive and linguistic strategies?*, the present study, in analyzing the document in its entirety, will verify whether there is any divergence in the representations and arguments of civilian and military medical ethics.

A starting point may consist in observing the juxtaposition and implicit evaluation[27] of the semantic fields of medical ethics– advocating flexibility, discretion, morality, and conscience – and military ethics, based on rigidity, directions, and law. The military and civilian sections' lexis reflect the resources on which professionals may rely to make life-changing decisions in unclear situations, thus confirming the more open discretion and individualism of civilian medical ethics in (3) and (4), and the more restricted precision for many decisions in the military context in (5):

(1) If a medical procedure is immoral or unethical according to the standards of the health care professional's belief system, then the senior medical officer should seek another similarly qualified professional to replace the individual who objects to the procedure. (EGP: 5)

(2) Health care professionals can invoke conscience clauses if they refuse to perform a legal role or responsibility based on moral or other personal objections. (EGP: 15)

(3) As described in this report, military health care professionals can rely on ethics guidance and standards developed by their professional societies to guide difficult ethical decisions. These codes provide a solid foundation on which to base ethical decision making, and the elements described in the codes are remarkably consistent across the professions. In addition, DoD and Military Department policies, instructions, manuals, and standard operating procedures provide comprehensive and often detailed procedural guidance that implicitly operationalize many of the ethical principles expressed in professional codes. (EGP: 4)

[26] Gross, "Caring for and about Enemy Injured", 23-27.
[27] Susan Hunston and Geoff Thompson, eds., *Evaluation in Text: Authorial Stance and the Construction of Discourse* (Oxford: Oxford U.P., 2001).

This duality is also present in the two jurisdictions' differences in relation to focus: upon a closer review of the Table of Contents, it is possible to notice a contrast between the civilian medical sections of the document, which deal with the universal medical ethics principles (autonomy, beneficence, non-maleficence, justice) that are at the heart of bioethics, and military ethics' core military values (loyalty, duty, respect, selfless service, honor, integrity, personal courage),[28] which are clearly listed in the related sections of the *Guidelines*. The principles of civilian medical ethics reflect abstract ideals and hypotheses that are formulated from a centrifugal discursive approach aimed at humanity as a whole. They reflect the previously outlined considerations on the Hippocratic Oath and often criticize the military's seemingly rigid approach. In contrast, the sections on medical ethics from a military perspective are grounded, centripetal, and based on the beliefs of a specific, hierarchical community whose aforementioned values are ingrained in military ethos and prevail regardless of the physician's branch of service. Furthermore, they display all of the idiosyncratic features of military institutional discourse, such as clearness of structure, certainty of conceptions, permanentness of phraseological units, plurality of special military lexis, and abundance of reductions and abbreviations.[29] The acronyms, along with commonly confused concepts (e.g. asymmetric warfare, triage, and cultural competency), are explained through narrations, definitions and appendixes to make them easier for non-experts to understand.

Another detectable linguistic peculiarity that emerges in the military sections consists in their extensive use of the passive tense and equivalent expressions. As highlighted in the table below, these are much more common in the "Principles and practice of military ethics" section and implicitly transmit the lack of complete freedom and agency over professional activities that are necessarily typical of the military and all those associated with it:

| Section | # words | # passives |
|---|---|---|
| Executive Summary | 6632 | 30 |
| 1. Introduction | 1913 | 19 |
| 2. Principles and practice of medical ethics | 6365 | 49 |
| 3. Principles and practice of military ethics | 5289 | 62 |
| 4. Ethical issues in military medical settings | 4048 | 23 |
| 5. Ethics education and training | 3932 | 23 |
| 6. Conclusion | 1162 | 16 |

Table 1: Frequency of words and of passive expressions for each section[30]

[28] Mehlman and Corley, "A Framework for Military Bioethics", 4-5.
[29] A.F. Mammadzade, "Lexical Features of English Military Discourse", *Вісник Запорізького національного університету*, 1 (2013), 139-142: 141.
[30] Author's elaboration (number of words excluding references).

The most present passive forms are verbal collocations using the 'auxiliary be + participle' form that is commonly found in legal English[31] through modal and lexical verbs indicating legal obligation even in collocations that are not perceived as legally binding in general English: provided (10 occurrences), required (9 occurrences), expected (9 occurrences), made (7 occurrences), obligated (6 occurrences), asked (6 occurrences), used (6 occurrences), given (5 occurrences), maintained (5 occurrences), needed (5 occurrences). This may be seen in the examples below, all taken from the section on military ethics:

(4) Military health care professionals are also expected to take care for detainees, enemy combatants, nonstate actors, local nationals, and coalition forces. (EGP: 37)

(5) in the combat or austere environment, challenging decisions have to be made by relatively junior primary care physicians (battalion surgeons). (EGP: 37)

(6) a lack of clarity in policies regarding the level of detail that should routinely be provided to commanders regarding a military member's health status and treatment. (EGP: 38)

(7) U.S. personnel can be challenged to maintain quality control in a clinic setting staffed with medical personnel of forces from developing nations. (EGP: 41)

Another common presence throughout the document consists in the use of metaphors, and more precisely war and martial metaphors, for "The ideological filter encased within the war metaphor is 'militarism', defined as a set of beliefs and values that stress the use of force and domination as appropriate means to solve problems and gain political power".[32] Indeed, expressions like "conflict" (31 occurrences used in an internal, metaphorical sense in the internal document), "moral injury" (11 occurrences), "salvage" (1 occurrence), and "to be outside the fight" (1 occurrence), are frequent in health care discourse in general to evoke strength and victory over illness and injury.[33] However, in this document, the terms "salvage" and "conflict" are used in their literal, and not rhetorical, sense in the sections on military medical ethics, and the war metaphors are interestingly present in reference to the external and internal conflict and damage brought by war to military health care providers when they are not free to act according to their individual moral compass. While this may seem like a contradiction, it actually represents a discursive strategy to acknowledge military medical

[31] Giuliana Garzone and Rita Salvi, *Legal English*, *2nd edition* (Milano: Egea, 2007).
[32] Peter B. Kraska and Victor E. Kappeler, "Militarizing American Police: The Rise and Normalization of Paramilitary Units", *Social Problems*, 44.1 (1997), 1-18.
[33] James Compton, "Shocked and Awed: The Convergence of Military and Media Discourse", in Peter Wilkin and Mark J. Lacy, eds., *Global Politics in the Information Age* (Manchester: Manchester U.P., 2006), 39-62; Jan Chovanee, "Weapon of Ms Destruction: The Subversive Role of Linguistic Creativity", *Slovak Studies in English*, 3 (2011), 82-93; Rose K. Hendricks et al., "Emotional Implications of Metaphor: Consequences of Metaphor Framing for Mindset about Cancer", *Metaphor and Symbol*, 33.4 (2018), 267-279; Jing-Bao Nie et al., "Healing without Waging War: Beyond Military Metaphors in Medicine and HIV Cure Research", *The American Journal of Bioethics*, 16.10 (2016), 3-11; Kayhan Parsi, "War Metaphors in Health Care: What Are They Good for?", *The American Journal of Bioethics*, 16.10 (2016), 1-2.

professionals' difficulties and recalls the language of their professional environment:

> (8) the very act of experiencing, witnessing, or participating in troubling events can undermine a Service member's humanity. An act of serious transgression that leads to serious inner conflict because the experience is at odds with core ethical and moral beliefs is called moral injury, which can be long lasting and painful. (EGP: 1-2)
>
> (9) Acknowledge the moral injury that may occur as a result of encountering an ethical dilemma and incorporate practices that enhance resiliency and assist professionals in coping with and recovering from these injuries. (EGP: 4)
>
> (10) In all settings, military and civilian, health care professionals face innumerable conflicts in the practice of their vocation. They might face inner conflicts over the morality or appropriateness of certain medical procedures at the beginning or end of life. They might face conflicts over the best use of scarce resources. Conflicting roles and expectations of how one fills multiple responsibilities and obligations can place the health care professional in a difficult and ambiguous situation. Potential ethical conflicts between professional standards and other values, commitments, or interests can become even more acute when health care professionals work in military environments. (EGP: 1)

The dichotomy between military and civilian medical ethics is also present throughout the document when it comes to precision in indexicality and information in the presented case studies. In fact, the civilian medical ethics perspective is the most critical of the two and often takes an 'accusing' stance in relation to current military protocol; however, its arguments are often less persuasive due to its vaguer indexical expressions and frequent lack of clear reference to time, place or circumstances, as emerges in the excerpts below:

> In both the military and civilian settings, a health care professional may be required, by law, to breach patient confidentiality....
>
> In some cases, a Service member may be required to receive treatment for an infectious disease, such as tuberculosis, even if he or she refuses treatment, in order to protect the health of his or her unit.
>
> In both the military and civilian settings, a patient with an infectious disease may be quarantined against his or her will…. (EGP: 10)

The parts relating to military ethics, on the other hand, indicate rules and policies that are in force, with detailed explanations and precise discourse indexicality. This conveys the overall impression that there is already an efficient procedure in place based on experience and implementation, rather than principles and ideals, as may be seen below:

> In the context of health care, one such example is a DoD policy on influenza vaccinations. It is DoD policy that "all Active Duty and Reserve personnel be immunized against influenza with vaccines approved for their intended use by the Food and Drug Administration [FDA] and according to the recommendations of the Centers for Disease Control and Prevention (CDC) and the Advisory Committee on Immunization Practices (ACIP)." The point here is that the unit benefits if all are immunized, and

> immunizations maintain the health of the force. In this example, no individual may value their personal preferences over that of their unit. Moreover, military personnel are sometimes asked to incur risks not asked of civilians. In addition, DoD can also request approval to administer a non-FDA approved (i.e., experimental) vaccine, particularly if it is believed that such vaccines provide a critical potential countermeasure to a possible and plausible biological attack. (EGP: 25)

One common argumentative strategy concerns the military and civilian communities' proposals for further research and implementation throughout the entire document. Such advice is presented by means of dialogical 'findings' and 'recommendations' subsections that are located after the descriptions of practices and legislation that are currently in place. These are regularly composed by: a statement on the current situation (the presence of defective – or absence of necessary – procedures and practices); the presentation and illustration of the complicating factor or consideration that raised the issue (usually introduced by the contrastive discourse marker 'however'); the recommendation, with occasional references to deriving benefits. The finding-recommendations pairs therefore follow a theme-rheme structure to present known information to non-experts and introduce new aspects to reflect on. The efficacy of these proposals is strongly correlated to the amount and precision of technical information, which in turn depends on whether the finding is linked to a complete void or to the need to integrate and improve a practice or institution that is already in place. This difference may be observed upon comparing two such findings-recommendation pairs: (10) is generic and therefore arguably less helpful because it does not provide any details or concrete suggestions, while (11) contemplates the enhancement of existing resources and can therefore draw on preexisting terms and materials as an indexical and conceptual starting point:

(10) Finding 9: DoD does not have an online portal to provide efficient access to medical ethics information and resources.

> Recommendation 9: DoD should create an online medical ethics portal. At a minimum, it should include links to relevant policies, guidance, laws, education, training, professional codes, and military consultants in medical ethics. (EGP: 43)

(11) Finding 16: Joint Knowledge Online provides a Basic and Advanced Course in Medical Ethics and Detainee Health Care Operations. These courses provide valuable information for deploying health care professionals on ethical issues related to the care of detainees.

> The current implementation of the course could be improved to provide more efficient communication of the concepts and scenarios covered. In addition, it would be beneficial to have a course covering basic principles of medical ethics for all health care professionals.
>
> Recommendation 16: To enhance health care practices in the military operational environment, DoD should:
>
> a) Update the Joint Knowledge Online Medical Ethics and Detainee Health Care Operations courses to improve the efficiency with which the information is communicated and maintain currency of the

> material.
> b) Create a medical ethics course to cover key principles, ethical codes, and case studies applicable to both garrison and deployed environments, in addition to providing resources and appropriate steps to take when assistance is needed in resolving complex ethical issues. This course should be required for all health care professionals. (EGP: 56)

The factors that have been analyzed in this section highlight the presence of an unbalance and a perceivable lack of solid connection between military and civilian medical ethical values and practices, and the resulting difficulty in arguing possible common solutions. The texts reflecting the military perspective discursively hold the upper hand when it comes to precision and confidence in the conveyed information since they refer to specific rules and regulation. They therefore tend to sustain established practices while admitting that they could be improved. In contrast, the civilian medical ethics approach represents the more revolutionary side by openly questioning current practices in their entirety in view of a more universal humanitarian approach to decision-making in ethical and bioethical medical issues but doing so without proposing concrete alternatives.

## 5. Conclusions

The present Critical Discourse Analysis, assisted by qualitative findings and carried out on the Defense Health Board's *Ethical Guidelines and Practices for U.S. Military Medical Professionals*, has revealed a number of relevant findings. *RQ1*, as regards the macrostructure, underlined the forward-thinking aim and structure of the document, with its combination between knowledge dissemination and discussion. *RQ2* expounded on the difficult, and often misunderstood, position of military medical professionals on many levels due to their dual loyalty and oath. The *Guidelines* were presented upon completion yet remain unimplemented, officially due to changes in presidential administration and chains of command, but very probably, in light of linguistic and discursive analyses, also partially due to a certain degree of looseness in structure and lexical choice. This may be reflected, as *RQ3* pointed out, in its unbalanced discursive perspective, which presents significant points of disagreement between civilian and military medical ethical and bioethical practices. Moreover, the document presents considerations that undermine the potential persuasiveness of the arguments and solutions that are advanced. The qualitative analysis has underlined that the excessively rigid and deontic discourse of military ethics is compensated by its greater specialization and experience, while the field of civilian medical ethics comes across as insightful and well-intending but rather vague and impracticable in its descriptions, examples, and proposals. Any future reworking of such a document or procedure would require the sections on civilian medical ethics to present detailed case studies, along with indications of the rules and education curricula that need to be changed by using precise indexical markers and more confident lexical choices, as well as more (both active and passive) verb tenses and dynamic modality to show action and change. On the other hand, the military perspective should be better integrated with the other sections and discuss how its values and

regulations could be more compatible with individual needs. This would enable military medical ethics and culture to be more comprehensible to civilian professionals and the new legal subjects who are compelled to prevail upon these twofold obliged professionals in hitherto uncontemplated circumstances that impact on medical ethics and bioethics debates and cultures.

Karen Dwyer

# Discourse Analysis for Exploring Bioethics in Biomedical and Medical Sciences Education

**Abstract**: Bioethical debates need to be contextualised within social, political and ideological contexts. Discourse analysis (DA) is an effective method for providing a means of understanding the power systems that construct 'truth' within health and health care practices, and the influences motivating health policy. Incorporating DA approaches to Biomedical and Medical Science (BMS) education can offer richer insights into the texts that provide a barometer of sociocultural change. Within the biomedical and medical curriculum, this should include a broad range of perspective on bioethical issues encouraging a more 'global' understanding of the range of issues involved in a bioethical debate. The present paper offers an illustration of how DA can be incorporated into BMS education through examining the medical cannabis debate. Using DA approaches allows students to explore the culture, politics, and conflicting values that underpin the medical cannabis positions. In particular, it focuses on how the concepts of 'addiction' and 'prohibition' associated with certain drugs as defined by institutions and social actors have influenced perceptions of these drugs and their use, and in turn influenced medical cannabis policy.

Keywords: *bioethics*, *cannabis*, *cannabis user*, *discourse analysis*, *drug policy*, *public policy*

## 1. Introduction

Bioethics aims to establish how best we may deal with ethical controversies that emerge from new situations and possibilities as a result of advances in biology and medicine. It balances the benefits advancements bring for the betterment of health against ensuring moral and legal discernment relating to medical policy, practice and research. Critical in understanding the competing values contained within bioethical debates is recognising that biomedicine functions to "legitimate the existing social order, to conceal the class basis of society, and to create a worldview that is congruent with the interests of the dominant social class".[1] At best, "bioethics can be seen as a 'mediating element' between politics, the public and science within contemporary society",[2] or perhaps as an "instrument of compromise that serves to placate public and political concerns while establishing legitimacy for remunerative projects".[3] It is thus important to examine bioethical debate in the context of the social,

[1] Edwin J. Greenlee, "Discourse, Foucault, and Critical Medical Anthropology", *Central Issues in Anthropology*, 9.1 (1991), 79-82.
[2] Charles E. Rosenberg, "Meanings, Policies, and Medicine: On the Bioethical Enterprise and History", *Daedalus*, 128.4 (1999), 27-46.
[3] Brian Salter and Mavis Jones, "Biobanks and Bioethics: The Politics of Legitimation", *Journal of European Public Policy,* 12.4 (2005), 710-732.

political and ideological domains in which it is conducted[4] in order to encourage a more 'global' understanding of the range of issues involved.

Discourse Analysis (DA) offers a particularly useful set of tools to this end. It exposes the relationship between discourse and ideology and the ways in which text encodes theories of reality and relations of power. This paper will put special emphasis onto Foucauldian Discourse Analysis (FDA) and Critical Discourse Analysis (CDA). A Foucauldian framework offers a means to understand how relations of power are determined discursively but also how 'the 'natural' body of the modern period is "created socially and culturally by means of disciplinary techniques and linked into networks of power and knowledge".[5] Critical Discourse Analysis (CDA) provides techniques to unpack the interconnectedness of discourse, power and ideology and social structure,[6] to reveal how dominant discourses are embedded in institutions, in the behaviour, rituals, and practices that go with those institutions and legitimate existing power relations and social structures. Its critical aspect lies in that it aims to denaturalise the ideologies within the institutional discourses, which would otherwise be hidden.[7] These are rigorous and powerful approaches to discourse that can be used to understand the inner workings of systems of power through which 'truth' in biomedical and medical practices is constructed.[8]

This paper aims to illustrate how a Foucauldian influenced approach to discourse and CDA can offer excellent means to explore bioethical issues within Biomedical and Medical Science (BMS) studies in Higher Education (HE). Described here is a sequence of tasks that were used in a series of scientific communication workshops to introduce postgraduate BMS students to DA as an approach to text more generally, and to how it can be applied to deconstruct bioethical debate more specifically. The bioethical topic we focused on was the advancement of the medical cannabis programme in the UK. The term 'the medical cannabis programme' refers to the regulation over the importation, prescription and supply of cannabis-based products or preparations. For the purposes of this paper, the term 'the advancement of the medical cannabis programme' refers to the potential for increased research into the benefits and harms of cannabis-based medicinal products, with the aim of allowing, where appropriate, access to these products for treatment of illnesses that are otherwise non-responsive to medication. Medical cannabis had received significant media attention in the months prior to the workshops running: the reporting of a number of high profile cases of children with severe epilepsy, controlled only by cannabis oil, garnered public support for amendment to the medical cannabis legislation (discussed later in this paper). Subsequently, renewed discussion regarding the scientific evidence for the efficacy and safety of medical cannabis emerged providing the backdrop for the examination of this topic. In the following section, a brief overview of the cannabis policy in the UK is provided to contextualise the debate. This constitutes a summary of the introductory lecture given to the students prior to the DA tasks described below.

[4] Roger Cooter, "The Ethical Body", in Roger Cooter and John V. Pickstone, eds., *Medicine in the Twentieth Century* (Amsterdam Harwood Academic, 2000), 451-67.
[5] Greenlee, *Discourse, Foucault, and Critical Medical Anthropology*, 79-82.
[6] Paul Simpson and Andrea Mayr, *Language and Power* (London: Routledge, 2010), 51.
[7] Norman Fairclough, *Language and Power* (London: Longman, 1989).
[8] Brian David Hodges et al., "Discourse Analysis", *BMJ*, 337 (2008), a879.

## 2. Cannabis Policy in the UK Context

Following a long history of widespread medicinal application, cannabis use without prescription from a doctor first became prohibited in the UK under the Dangerous Drugs Act (1928). After decades of negotiations, the legal and administrative framework for all international drug control, led by the United States' insistence on an international prohibition-based approach,[9] was finally laid out in three international conventions negotiated under the auspices of the United Nations (UN).[10] In 1964, 172 party states ratified the first of these, the UN 1961 Single Convention, which divided substance control into four Schedules.[11] Schedule IV contains the most highly controlled drugs, followed by Schedule I, then Schedule II and finally Schedule III. Cannabis was placed in Schedule 1 along with heroin, a classification that included drugs with no medical value and which were perceived to possess great harms. Within this schedule, the cultivation of cannabis was criminalised.

In 1971, the UK introduced a drug classification system along with sentencing guidelines, and the Advisory Council on the Misuse of Drugs (ACMD) was established. Drugs became classified according to a three-tiered system in which they were ranked according to their perceived harmfulness, while penalties for drug use and the offence of 'intent to supply' were introduced proportionately to this system of classification.[12] Cannabis was placed in the middle of the three classes of prohibition. Today cannabis is the most widely used drug in the UK. A recent Home Office survey showed that 7.2% of adults aged between 16 and 59 used cannabis in a 12 month period (around 2.4 million).[13]

In 2004, following independent reviews of the medical evidence for cannabis[14] and of the effectiveness of anti-drug enforcement laws in the UK,[15] the legal classification of cannabis was downgraded from Class B to Class C, in what represented the most significant liberalisation of British

[9] Jay Sinha, *The History and Development of the Leading International Drug Control Conventions* (Canada: Library of Parliament, 2001).

[10] *The Single Conventions on Narcotics, 1961* (Single Convention) as amended by the *Protocol Amending the Single Convention on Narcotic Drugs, 1961*: the *Conventions on Psychotropic Substances* (Psychotropic Conventions); and the *Conventions against Illicit Traffic in Narcotic Drugs and Psychotropic Substances* (Trafficking Convention).

[11] These are detailed in *Article 2 Substances under Control*: Schedule I – these drugs are subject to all measures of control applicable under the Convention and in particular to those prescribed in certain Articles; Schedule II – these drugs are subject to the same measures of control as drugs in Schedule I with the exception of measures presented in Article 30, paragraphs 2 and 5 in respect of retail trade; Schedule III – these drugs are subject to the same measures of control as preparations containing drugs in Schedule II except that specific paragraphs of Article 31 and 34 need not apply and that for the purposes of estimates (Article 19) and statistics (Article 20), the information required shall be restricted to the quantities of the drugs used in the manufacture of such preparations; and Schedule IV – these drugs shall also be included in Schedule I and subject to all measures of control applicable to drugs in the latter Schedule and in addition thereto further measures should the State Party, in its opinion, require such measures.

[12] Drugs classified as Class A (heroin, cocaine, crack cocaine, LSD and magic mushrooms) are considered most harmful. Class B includes amphetamines, barbiturates and codeine, cannabis, while Class C includes anabolic steroids, benzodiazepines, and minor tranquillisers acquired without a doctor's prescription.

[13] Home Office Report, *Drug Misuse: Findings from the 2017/18 Crime Survey for England and Wales* (2018), 4.

[14] House of Lords Select Committee on Science and Technology, *Cannabis: The Scientific and Medical Evidence* (London: House of Lords, The Stationary Office, 1998).

[15] Police Foundation, *Drugs and the Law: Report of the Independent Inquiry into the Misuse of Drugs Act 1971* (London: The Police Foundation, 2000); Advisory Council on the Misuse of Drugs, *Further Consideration of the Classification of Cannabis under the Misuse of Drugs Act 1971* (2005).

drug law in more than three decades.[16] However, within a few years, compelling evidence from large-scale, longitudinal studies emerged of the correlation between cannabis use and psychosis.[17] The media drew attention to this association by focusing on events that linked cannabis to psychosis and violent crime.[18] The government responded, initially by increasing penalties on all Class C drugs, along with a public commitment to fight the 'war on drugs', and later in 2009, by reclassifying cannabis as a Class B drug. It is widely thought that this reversal of cannabis classification in 2009 was a response to the populist desire for a government that was "tough on crime, tough on the causes of crime".[19] It is also rumoured that it was a compromise made by the Prime Minister at the time, Gordon Brown, in order to secure support for his Premiership from the editor of the *Daily Mail*, a newspaper at the forefront of anti-cannabis reporting.[20] The unfortunate consequence of this U-turn and renewed crackdown on importation of cannabis was an increase in the production *within the UK* of hybrid forms of cannabis containing high levels of delta-9-tetrahydrocannabinol (THC),[21] the compound that creates the drug 'high' and is linked to psychotic-like experiences and increased dependence.[22]

In 2018, as a result of a number of high-profile cases of children being hospitalised following seizures from epilepsy, the cannabis debate was once again thrust under the media spotlight.[23] Sectors of the press known for traditionally being hostile to cannabis use, this time, took a more sympathetic approach in their reporting of two cases of young children with life threatening epilepsy, Alfie Dingley and Billy Caldwell, whose seizures could be controlled with cannabis oil. When Billy Caldwell's supply of medical cannabis oil sourced from Canada was seized at customs and his mother was threatened with arrest for importing it, the government buckled under public scrutiny of its hard line stance on medical cannabis and the Home Office granted him an exceptional licence to use the cannabis oil medicine. At the same time, it was announced that the chief medical officer for England would review the status of medical cannabis for such cases.

On 1st November 2018, an amendment to the UK legislation moved cannabis-based products from Schedule I to Schedule II, allowing their use on prescription from doctors on the relevant Specialist Register of the General Medical Council in cases where the clinical needs of patients could not be met by licensed medicines. The media response was to highlight the paucity of evidence on the efficacy of

[16] Michael Shiner, "Drug Policy Reform and the Reclassification of Cannabis in England and Wales: A Cautionary Tale", *International Journal of Drug Policy*, *26*.7 (2015), 696-704.
[17] Jim Van Os et al., "Cannabis Use and Psychosis: A Longitudinal Population-based Study", *American Journal of Epidemiology*, 156.4 (2002), 319-327.
[18] INCB, *Report of the International Narcotics Control Board for 2002.E/INCB/2002/1* (Vienna: United Nations, 2002).
[19] Robert Reiner and Tim Newburn, "Crime and Penal Policy", in Anthony Seldon, ed., *Blair's Britain, 1997-2007* (Cambridge: Cambridge U.P., 2007), 318-340.
[20] Max Daly and Steve Sampson, *Narcomania: How Britain Got Hooked on Drugs* (London: Random House, 2013); Greg de Hoedt, *Written Evidence Submitted by the UK Cannabis Social Club (DP177), Drugs: Breaking the Cycle* (London: Home Affairs Committee, 2012).
[21] David Nutt, "Why Medical Cannabis Is Still out of Patients' Reach", *BMJ* (2019), 365.
[22] Marta Di Forti et al., "High-potency Cannabis and the Risk of Psychosis", *The British Journal of Psychiatry,* 195.6 (2009), 488-491.
[23] Damien Gayle, "Medicinal Cannabis: How Two Heart-Breaking Cases Helped Change Law", *The Guardian* (26/7/2018); Alfie Dingley, "Amazingly Well After Cannabis Treatment", *BBC News Online* (27/10/ 2018).

medical cannabis and to promote concerns about the advancement of the medical cannabis programme. In a reversal of the 2018 amendments, on 8th August 2019, the National Institute for Health and Care Excellence (NICE) announced its recommendations that medical cannabis cannot be approved for pain or for use in children with severe epilepsy. In order to address the crucial questions about safety and efficacy of medical cannabis, NICE called for further randomised controlled trials (RCTs),[24] a position criticised for being dismissive of patients' own accounts of medical cannabis treatment.

In the absence of scientific evidence of the efficacy and limitations of harm that are required to legitimise the legalisation of medical cannabis more widely, the government exercises prudence in continuing to rank cannabis at the highest level of prohibition and risk.[25] It argues that the maintenance of the illegal status of cannabis aims to prevent addiction, to promote good health and to help strive towards a civil society. This position invokes the non-maleficence principle (i.e. 'do no harm'), a paternalistic stance assuming trust is vested in the practitioner or policy maker as the one with critical expertise who acts to protect citizens. Yet, it has been difficult for the scientific community to challenge the non-maleficence position when the government's stance is an ideological positioning of a 'war on drugs' that has severely limited possibilities for scientific research aimed at building a body of evidence to elucidate the full potential of both harms and benefits of medical cannabis. However, as the world's largest producer and exporter of legal cannabis for medical and scientific uses, the UK government clearly recognises that cannabis has medical potential.[26]

Since drug control in the UK is vested in the Ministry of Justice, resistance to the advancement of the medical cannabis programme is often based on legal and moral arguments for prohibition rather than on a medical rationale. The prohibition discourse has divided, but also criminalised, individuals according to their use or abuse of particular substances. In this way, discourses of different drug use reflect complementary and contested ideological positions.[27] Competing positions described by Foucault, such as the 'insane' and the 'sane' consisting of processes of 'social objectification and categorization', similarly exist in the predominant cultural discourse about drug prohibition.[28]

From this perspective, the use of medical cannabis for either medical or recreational use, places the user in the category of 'drug-abuser' or criminal and represents a social deviant, who should be castigated, socially excluded and punished, leading to the creation of an underclass of people with criminal records.[29] In contrast, prescription painkillers at the centre of an opioid epidemic, which are highly addictive, and caused 220 deaths in England in 2018 alone, do not produce the same stigma.[30]

[24] RCTs are thought to be the 'gold standard' of medical trials because they arguably provide the highest certainty that effects can be attributed to the intervention.
[25] Nutt, *Medical Cannabis*, 365.
[26] Report of the International Narcotics Control Board (2018).
[27] Kenneth W Tupper, "Drugs, Discourses and Education: A Critical Discourse Analysis of a High School Drug Education Text", *Discourse: Studies in the Cultural Politics of Education,* 29.2 (2008), 223-238.
[28] Andy Letcher, "Mad Thoughts on Mushrooms: Discourse and Power in the Study of Psychedelic Consciousness", *Anthropology of Consciousness*, 18.2 (2007), 74-98.
[29] From Statista, *Police recorded possession of drugs offences in England and Wales from 2004/05 to 2017/18*, *www.statista.com*.
[30] From the Office for National Statistics, *www.ons.gov.uk*.

Yet, according to the *Diagnostic Statistical Manual of Mental Health Disorders* (*DSM-V*),[31] a patient requiring opioids for pain treatment could quite easily meet five of the seven listed criteria for drug dependence.[32] The critical difference is that the production and licensing of opioid-based pharmaceuticals is legitimised by the involvement of large multinational companies and by their administration by professionals within the medical establishment.[33]

The dominant discourses of illicit drugs that legitimate existing power relations and social structures serve the interests of those authorities and institutions executing the 'global drug war'.[34] The media and anti-drugs educationalists transmit and cultivate discourses that perpetuate the continued promotion of the 'war on drugs' and demonisation of cannabis, serving the ideological and political interests of those who gain from maintaining these positions.[35] What follows is a description of how applying Discourse Analysis for the exploration of the bioethics of medical cannabis can help postgraduate university BMS students understand how the conceptualisation of cannabis, and of the cannabis user, as a criminal problem has emerged and influenced the debate today, thus exploring the examination of the bioethical debate beyond the pharmacological considerations. This does not claim to be a comprehensive guide to conducting DA in BMS studies. Instead the paper aims to demonstrate how an understanding of bioethics debates can be enriched if contextualised within the social, historical, political and ideological context in which they are conducted,[36] and in turn, facilitate a more 'global' understanding of different perspectives, interests and issues involved.

## 3. Incorporating Discourse Analysis in BMS Education

This paper describes a sequence of in-class tasks carried out by postgraduate level BMS students in a series of workshops across a 9 week period, which offered them an opportunity to explore the medical cannabis discourse through DA. The central focus of each task was to unpack the normalisation of behaviours and discourses that construct the notion of a cannabis user as 'subject' and cannabis as an 'evil', and how these perceptions have influenced the medical cannabis debate and policy. This paper presents the analyses that the students draw out in these tasks and the conclusions they reach.

### *3.1. A social constructionist orientation: conceptualising addiction*

[31] American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.) (Washington, DC: American Psychological Association, 2013).

[32] Howard A. Heit, "Addiction, Physical Dependence, and Tolerance: Precise Definitions to Help Clinicians Evaluate and Treat Chronic Pain Patients", *Journal of Pain & Palliative Care Pharmacotherapy*, 17.1 (2003), 15-29.

[33] Letcher, *Mad Thoughts on Mushrooms*, 74-98.

[34] Shane Blackman, *Chilling out: The Cultural Politics of Substance Consumption, Youth and Drug Policy* (McGraw-Hill Education, UK, 2004).

[35] Kenneth W Tupper, "Drugs, Discourses and Education: A Critical Discourse Analysis of a High School Drug Education text", *Discourse: Studies in the Cultural Politics of Education,* 29.2 (2008), 223-238.

[36] Roger Cooter, "The Ethical Body", in Roger Cooter and John V. Pickstone, eds., *Medicine in the Twentieth Century* (Masterdam: Harwood Academic Publishers, 2000), 451-67.

A key requirement of CDA is that it is critical in its destination,[37] i.e. it aims to unpack and denaturalise the hidden ideologies within institutional discourses.[38] In order to be able to take a critical stance in challenging the notion of objective and unbiased knowledge, students need to be familiar with the assumptions underlying social constructionism, the paradigm that underpins CDA. A social constructionist orientation to knowledge rests on the philosophical assumptions that knowledge is "socially constructed and relative to the language, concepts and apparatus used to create it",[39] as a consequence, "multiple versions of the world are legitimate ... texts are open to multiple readings; and ... language is non-representational".[40] The researcher needs to dispense with expectations of "absolute truths or absolute ethical positions",[41] and instead, acknowledge uncertainty and accept the inevitability of multiple perspectives from which the text can be viewed.[42]

The students explore this idea through looking at perspectives of addiction, a concept that is ideologically sanctioned and classified either as a disease or a moral failing according to its biological or societal context.[43] In a preliminary class discussion prior to carrying out a series of DA tasks (to follow), they were asked to classify definitions of addiction extracted from the medical sciences and psychology literature, and to consider how such classification might impact on potential for intervention.

These definitions vary widely and include notions of loss of control over a substance until it causes harm,[44] disease-like connotation,[45] an imbalance of the central nervous system,[46] having neurobiological underpinnings,[47] phenotypes explicable by gene-environment interactions,[48] and pattern of choices.[49] The students recognised these can be divided into two competing conceptualisations of addiction. According to the disease model, addictive behaviour is a compulsion, of which the addict does not have conscious control, resulting in loss of his/her rational judgment.[50] One obvious problem for the disease model is that addicts can in fact recover from their addiction and

[37] Deborah Lupton, "Discourse Analysis: A New Methodology for Understanding the Ideologies of Health and Illness", *Australian Journal of Public Health,* 16.2 (1992), 145-150.
[38] Norman Fairclough, *Language and Power* (London: Longman, 1989).
[39] Ian Hacking and Jan Hacking, *The Social Construction of What?* (Cambridge, Mass. and London: Harvard U.P., 1999).
[40] Robert White, "Discourse Analysis and Social Constructionism", *Nurse Researcher,* 12.2 (2004).
[41] Margaret Wetherall, "Debates in Discourse Research", in Margaret Wetherall et al., eds., *Discourse Theory and Practice: A Reader* (London: Sage Publications, 2001), 380-399.
[42] Walter Humes and Tom Bryce, "Post-structuralism and Policy Research in Education", *Journal of Education Policy*, 18.2 (2003), 175-187.
[43] K. Klaue, "Drugs, Addiction, Deviance and Disease as Social Constructs", *United Nations International Drug Control Programme Vienna Bulletin on Narcotics*, LI.1-2 (New York, 1999), 47.
[44] See *Addiction: What Is It?*, *www.nhs.uk*.
[45] Jim Orford, "Addiction as Excessive Appetite", *Addiction,* 96.1 (2001), 15-31.
[46] Roger E. Meyer, "The Disease Called Addiction: Emerging Evidence in a 200-year Debate", *The Lancet,* 347.8995 (1996), 162-166.
[47] Aviel Goodman, "The Neurobiological Development of Addiction: An Overview", *Psychiatry Times*, 26 (2009), 1-14.
[48] Barry T. Declan, "The Globalization of Addiction: A Study in Poverty of the Spirit", *The Journal of Nervous and Mental Disease,* 198.6 (2010), 462.
[49] Gene M Heyman, "Addiction and Choice: Theory and New Data", *Frontiers in Psychiatry,* 4 (2013), 31.
[50] Alan I. Leshner, "Addiction is a Brain Disease, and it Matters", *Science,* 278.5335 (1997), 45-47.

become responsive to contingencies.[51] In contrast, within the choice model, addicted persons have volition mechanisms and therefore self-control, but simply make bad choices. The importance of these models and the dominant discourses of addiction is that they influence public and policy makers' perceptions of whether those who are suffering from an addictive illness should be punished for their behaviour, or instead, whether blame should be withheld and compassion exercised. If the disease concept is applied and addicted persons are not viewed as responsible for their behaviour, this may impact on reducing the stigma of addiction, while conversely, adopting a disease model risks stigmatising addicted persons by denying them the opportunity to develop self-control, further eroding their self-esteem.[52] The discussion leads to the conclusion that central to the conceptualisation of addiction and the drug debate more broadly is the idea that, even in the context of a plethora of scientific research, there are multiple ways to perceive addiction, and that our perceptions impact on the way in which people and their actions are sanctioned or judged. This then influences decision making for judicial, medical or social intervention. Examining different models of addition introduces students to the idea that 'truth' is something that we "create and derive through actively trying to make sense of the world around us, rather than as something that is lying around waiting to be discovered"[53] and that there are implications for how we create 'truth' within our worlds. This idea is advanced in the next task.

We then move to consider the role of discourse in constructing realities, the way they enable and constrain construction of a topic, and their direct consequences for different groups of people. In this stage, students are introduced to Discourse Analysis informed by Foucauldian theory, an approach concerned with a culturally constructed representation of reality, which defines subject framing and positioning. For Foucault, discourse is a system of representations involving the production of power/knowledge through language. He argued that discourse is always productive, constituting human subjects and reality. He was thus interested in how discourse enables and constrains the way in which phenomena can legitimately be spoken about, but also the implications this has on individuals within such a system. For our immediate purposes, FDA therefore offers a means of considering the effects discourses of drugs and addiction have in how we disallow, marginalise or criminalise others.

Whilst there is no definitive method of FDA, Foucault's theoretical insights have been developed into different methods for analysing discourse from a Foucauldian perspective, the most detailed being Parker's 20 stage process, which focuses on the ways in which discourse functions to construct objects and achieve certain subject positions, subjectivities and ways of being.[54] In this task, the BMS students use Willig's six-stage process, a condensed version of Parker's original 20 stages,[55] a summary of which is as follows: 1. identify the discursive objects in the data; 2. identify the discourses at work in terms of how they discuss the discursive object; 3. identify the 'action orientation' of the talk, i.e.

[51] Stephen J Morse, "Addiction, Genetics, and Criminal Responsibility", *Law and Contemporary Problems,* 69.1-2 (2006), 165-207.
[52] Lily E Frank and Saskia K Nagel, "Addiction and Moralization: the Role of the Underlying Model of Addiction", *Neuroethics*, 10.1 (2017), 129-139.
[53] Cath Sullivan, "Theory and Method in Qualitative Research", in M. A. Forrester, ed., *Doing Qualitative Research in Psychology* (London: Sage Publications, 2010), 15-38.
[54] Ian Parker, *Discourse dynamics: Critical Analysis for Social and Individual Psychology* (London: Routledge, 1992).
[55] Carla Willig, *Introducing Qualitative Research in Psychology* (Maidenhead: Open U.P., 2013), 115.

those responsible to act by talking about the issue in a particular way; 4. identify the subject positions that are produced through the above stages; 5. identify 'subjectivity', i.e. the ways in which individuals come to understand their experience based on how the object is constructed; and 6. identify the implications of the above five stages. Willig's six stages offer BMS students an accessible introduction to a Foucauldian approach by allowing them to map some of the discursive resources used in a text and the subject positions they contain, and to explore their implications for subjectivity and practice.

The data in this task are extracted from an anti-drugs campaign consisting of 48 sheet posters and press ads, which were launched across 17 boroughs in London in 2004, featuring on beermats, billboards and flyers. Each poster features one of three American drug addicted people, either Roseanne Holland, Melissa Collara, or Penny Wood[56] in a series of six police mugshots spanning roughly an eight-year period.[57] The deterioration of their health is documented in stages with each mugshot, and in each case ending with a photograph of them clearly physically unwell and unrecognisable from the damage of drug addiction. Above the mugshots is the slogan 'Don't let drugs change the face of your neighbourhood'. Beneath is the telephone number and instruction to 'Call Crime Stoppers', an independent UK charity that gives people the power to report crime anonymously. [58] Rather than a direct attempt to dissuade people from trying drugs, the campaign "targeted Londoners living in areas affected by drug dealing and associated problems, such as gun crime, burglary, street robbery, prostitution and vehicle crime",[59] with the aim of rallying their support to act against drug related crime. What follows is a description of the students' interpretations of the ways in which drugs, drug addiction and the drug user are constructed, negotiated and mobilised through the discourse of this drug campaign.

Drug and drug addiction are the discursive objects. By referring to 'don't let drugs change the face of your neighbourhood', the subjects 'drug dealers' and 'addicted people' are collapsed into one category, as the social problem being addressed. The addicted persons are themselves not presented as victims of drugs, rather their suffering is irrelevant in the criminal discourse on drugs, and instead they are represented as subjects against whom law-abiding citizens of the neighbourhood are pitted in conflict in the 'war on drugs'. Rather than making any attempt to discourage people from illicit drug use, the campaign focuses on the criminality of drugs and places the public as the victim of drugs, drug dealers and drug-addicted people. The statement advising the public to call Crime Stoppers serves to place drug addiction in the criminal/judicial domain rather than in the health domain, despite the obvious damage the drug addiction had caused these women. This is not a health campaign that seeks to reach those who are suffering drug misuse, but is a Metropolitan police anti-crime campaign that aims to remove the 'problem'. The aim is to marshal an allegiance with the police by placing responsibility on citizens for protecting and maintaining the community. Possibilities for action are mapped within the discursive constructions identified in the text by instructing citizens to police their streets by providing information to the state, to act against crime and against drugs, and by licensing 'the innocent' to act against 'the guilty' in eradicating the 'social disease'.

[56] The London Metropolitan police were unable to use police images of British addicts because of confidentiality laws.
[57] The Advertising archives, *www.advertisingarchives.co.uk*.
[58] Joe Lepper, Shocking Images of Addicts Used for Met's Drugs Push, *www.campaignlive.co.uk*.
[59] Lord President of the Council et al., Tackling Drugs Together: A Strategy for England 1995-98 (London: HMSO, 1995).

The students were asked to consider what the agenda might be that governs the construction of this campaign as conceptualising drugs and drug addiction in such a divisive way. They were then shown the UK Government strategy *Tackling Drugs Together: A Strategy for England 1995-1998*[60] to contextualise the agenda behind this campaign. Within this strategy, drug harms were referred to as "intrinsically linked to criminality as drug-related crime",[61] consolidating a criminal-justice control over UK drug policy.[62] The strategy aimed to combine accessible treatment with vigorous hard-line law enforcement as the solution.[63] The primary aim was to decrease both the risk of drug use and the amount of drug-related criminal behaviour. This prohibition approach typified the problem of anti-drug campaigns, which have been shown to confirm existing negative images of drug users while using a moralistic tone that tends to intensify drug users' low self-esteem and confirms their belief that public authorities are more interested in judging them than helping them.[64] Such an approach only leads to drug users' increased sense of alienation, but also conforms to the stereotype of the drug user, which can feed into the public's anxieties about drugs.[65] These campaigns are bound up in conventional discourses that claim to represent truths about drugs embedded in prohibitionist policy responses to them.[66]

Health campaigns have often employed the ideas of surveillance, for example when aiming to reduce alcohol consumption, obesity or smoking. Numerous campaigns have employed Foucault's concept of the panopticon surveillance to promote self-regulation as a pre-eminent form of social control by important social institutions,[67] ultimately placing responsibility on individuals to exercise control over their own bodies. This project did not explore this topic further but there is certainly sound pedagogical motivation for developing an additional workshop in the series that might explore this campaign in the wider context of public surveillance and health campaigns. These anti-drug campaigns under discussion differ to those employing self-regulation strategies as a form of social control in that they encourage social control via the surveillance of others, an approach more consistent with Mathiesen's concept of the synopticon, a form of surveillance in which "the many see and contemplate the few" as a means of direct control of our consciousness through a whole system of messages.[68] This reinforces the positioning of the drug user as a criminal rather than a victim, whereby through the criminal discourse on drugs, addiction is moralised, the drug user is conceptualised as part of the evil of the drug itself. Critically, it is this moralising of drug use that carries considerable

[60] The UK Government Strategy Published Tackling Drugs Together: A Strategy for England 1995-1998.
[61] Neil Hunt and Alex Stevens, "Whose Harm? Harm Reduction and the Shift to Coercion in UK Drug Policy", *Social Policy and Society,* 3.4 (2004), 333-342.
[62] Mark Monaghan, "The Recent Evolution of UK Drug Strategies: From Maintenance to Behaviour Change?", *People, Place & Policy Online*, 6.1 (2012).
[63] Ibid.
[64] Tim Rhodes, "The Politics of Anti-Drugs Campaigns", *Druglink,* 5.3 (1990), 16-18.
[65] Richard Davenport-Hines, *The Pursuit of Oblivion: A Global History of Narcotics* (WW Norton & Company, 2003).
[66] Tim Rhodes, "The Politics of Anti-Drugs Campaigns", *Druglink,* 5.3 (1990), 16-18.
[67] Danielle Couch et al., "Public Health Surveillance and the Media: A Dyad of Panoptic and Synoptic Social Control", *Health Psychology and Behavioral Medicine,* 3.1 (2015), 128-141.
[68] Thomas Mathiesen, "The Viewer Society: Michel Foucault's Panopticon Revisited", *Theoretical Criminology*, 1.2 (1997), 215-234.

influence on public and policy makers' perceptions of both illicit and medical drugs. In the next stage, the students explore the origins of this conceptualisation of the drug user.

*3.2. The international framework for drug policy*

One aspect of a Foucauldian influenced approach to discourse is how the ways of thinking and lines of argument have come to be generally accepted as realities. Important to understanding current drug discourses is thus how they have emerged via historical, political and economic processes, and indeed how the drug user has come to be seen as part of the evil of drugs rather than a victim of them. In this next stage of introducing DA approaches, the students examined the preamble to the 1961 UN Single Convention[69] in order to consider the extent to which this text serves to contextualise the cannabis discourses that exist today. The relevance of this document is that for over half a century of US advocacy for stringent narcotic control, US protagonists were vital in the shaping of the final form of the 1961 Single Convention, led by the long-time head of the US delegation, Harry Anslinger.[70] The convention focused primarily on the law enforcement aspect of control and the duty of international cooperation in stemming drug flow at source. This reflected both the United States' and Anslinger's own long-term obsession with the 'war on drugs'. The US Bureau of Narcotics, keen to vilify cannabis and discourage it from being cultivated for medical use, removed it from the US pharmacopoeia in 1934, in the belief that by disallowing medicinal use, recreational use could be restricted.[71] The purpose of the convention in 1961 was to Transfer to the United Nations the powers exercised by the League of Nations in connections with Narcotic Drugs.[72] The critical aspect of this task was for students to discuss how drug users are represented in the preamble of the framework that has influenced international drug policy for six decades. It begins as follow:

> The Parties,
> Concerned with the health and welfare of mankind,
> Recognizing that the medical use of narcotic drugs continues to be indispensable for the relief of pain and suffering and that adequate provision must be made to ensure the availability of narcotic drugs for such purposes,
> Recognizing that addiction to narcotic drugs constitutes a serious evil for the individual and is fraught with social and economic danger to mankind,
> Conscious of their duty to prevent and combat this evil,

The students make the following observations. From the first line of the *Single Convention* (1961), its moral stance as one concerned with "the health and welfare of mankind" is established. This is reinforced in the second line, which expresses recognition that drugs can be used for medical purposes and the alleviation of suffering, while suggesting the intention to use drugs for such purposes. This

[69] Single Convention, *The Single Conventions on Narcotics* (1961).
[70] David Bewley-Taylor and Martin Jelsma, "Fifty Years of the 1961 Single Convention on Narcotic Drugs: A Reinterpretation", *Series on Legislative Reform of Drug Policies*, 12 (2011), 1-20.
[71] Nutt, *Medical Cannabis*, 365.
[72] ECOSOC Official Records, No. 2, First Year Third Season (12 and 17 September 1946), 28.

establishes a moral authority on the use of drugs and the noble intention of the signatories. The next line immediately shifts to a darker tone in representing addiction as a serious "social and economic" danger to mankind. However, the preamble offers no reference to, or concern for, the individuals who experience the addiction, an absence that would seem to imply they are part of the drug 'problem'. In fact, the expression "effective measures against abuse of narcotic drugs" seems to collapse into one group at the centre of the *evil* of drugs both those who are involved in the illegal production and trade in illicit drugs and those who use drugs, in much the same way they were represented in the 1990's UK anti-drug campaign, discussed previously. The preamble would seem to suggest that it is these individuals as a collective who create "the need for robust international cooperation". The students concluded that evident in the convention is the stigmatisation of the drug user. Moreover, by identifying drugs as an evil, it obligates international action in embarking on its 'war on drugs'. By failing to distinguish between victims of drugs use and those profiteering from the production and supply of drugs, it places both groups as the enemy of the 'war on drugs'. In responding to the 'evil of narcotics', the preamble refers several times to 'universal action', 'calls for international co-operation' and 'aimed at common objectives', all calls for robust action. Their analysis is consistent with that of Lines, who explains:

> whatever one's perspective of the cause(s) of 'addiction', it is by definition the individual circumstance of an individual person. A person is 'addicted' to a narcotic; not a system, a law, a policy, a society or a government. The 'evil' and the 'danger' is therefore inextricably linked to the person who is drug dependent, and perhaps by extension to those others involved in the production, transportation and sale of drugs.[73]

Additionally, the students noted how aspects of the language reinforce the way in which the agency is constructed. The verbs are placed first in each clause, focusing on the action being carried out by the 'parties' only stated once at the beginning of the preamble. By structuring the clauses in this way, emphasis is placed on each action rather than on the agents. This is a matter of convention in the presentation of UN declarations; however, it is an interesting linguistic observation in this text since it creates a sense of the allegiance to this war on the evil of drugs, belying the considerable reluctance of states to agree this convention, which was signed following immense pressure from the US to pursue a prohibition approach.[74]

The subsequent discussion linking this text back to the aim of the task, i.e. to understand the historical factors in the present day drug discourses, led us to consider the importance of this framework in its underpinning of international drug policy for over 50 years. As a preliminary to this discussion, the students read Lines' article, which explores the relevance of this discourse within a human rights context. The students discussed the argument put forward by Lines in light of their own analysis. He points out that stigmatising and defining vulnerable individuals as 'evil' is inconsistent

[73] Rick Lines, "Deliver Us from Evil? – The Single Convention on Narcotic Drugs, 50 Years on", *International Journal on Human Rights and Drug Policy*, 1 (2011), 3-13.
[74] Jay Sinha, *The History and Development of the Leading International Drug Control Conventions* (Canada: Library of Parliament, 2001).

with the inherent dignity of mankind expressed in the Universal Declaration of Human Rights, which states that "the peoples of the United Nations have in the Charter reaffirmed their faith ... in the dignity and worth of the human person".[75]

Citing Room, he concludes that the impact of this stigmatising language when applied to individuals in the context of the conceptualisation of drugs as evil today "only serves as a justification of the convention regime of control and coercion",[76] and that "the demonisation of drugs combined with the need of the State to exercise power and control undermine fundamental human rights protections".[77] It is on an understanding of this historical basis of drug users being stigmatised as 'evil' that students then explored in the following series of texts how the representations of drugs, and more importantly, the drug user, has persisted until today in the framing of the debate on medical cannabis and government policy on drugs.

### *3.3. Illicit drug or medicine?*

The media play a critical role not only in disseminating scientific news but in shaping public understandings of science and influencing attitudes towards it. The media function as "the main source of people's knowledge, attitudes and ideologies",[78] through their control in filtering and translating scientific information, for example deciding on which aspects of scientific developments are newsworthy and which information or statistics are represented.

As a result, they have the power to shift public debate via agenda setting and defining public interest; framing issues through selection and salience; indirectly shaping public attitudes towards risk; in turn impacting on public perception of the relevance and scale of the problem presented, and feeding into political debate.[79] At the core of this is the notion of a frame, "a central organizing idea for making sense of relevant events and suggesting what is at issue",[80] through which 'facts' take on meaning.[81] As Entman stated, to frame is to take "some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem, definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described".[82]

Framing is particularly important in shaping public policy as it influences how important questions are problematised, who is held accountable and who is responsible for addressing the problem. Within

[75] United Nations. General Assembly, *Universal Declaration of Human Rights*, Vol. 3381 (Department of State, United States of America, 1949).
[76] Robin Room, "Addiction Concepts and International Control", *The Social History of Alcohol and Drugs*, 20 (2010), 276-289, 282.
[77] Lines, "Deliver Us from Evil?", 3-13.
[78] Teun A. Van Dijk, "News Racism: A Discourse Analytical Approach", in Simon Cottle, ed., *Ethnic Minorities and the Media* (Buckingham and Philadelphia, PA: Open U.P., 2000), 33-49.
[79] Kari Lancaster et al., "Illicit Drugs and the Media: Models of Media Effects for Use in Drug Policy Research", *Drug and Alcohol Review*, 30.4 (2011), 397-402.
[80] William A. Gamson, "News as Framing: Comments on Graber", *American Behavioral Scientist*, 33 (1989), 157-161.
[81] Gamson, *Framing*, 157-161.
[82] Robert M. Entman, "Framing Toward Clarification of a Fractured Paradigm", *Journal of Communication,* 43 (1993), 53.

biomedical and medical contexts, this can translate into a role in the influencing of policy making,[83] in terms of who benefits from or is excluded from medical or therapeutic interventions,[84] but also the scope for, and public expectations of, government intervention.[85] For example, health problems thought to be arising from individual behaviours come to be framed in individualistic terms, while those thought to emerge from environmental factors, and which have the potential to affect everyone, are less amenable to public policy solutions that burden powerful groups.[86] Whether the media define cannabis as a medicine or as an illicit drug has political, legal and social implications; framing cannabis as the former can encourage public support for treatment and licensing, while framing it as the latter can lead to public disapproval of any advancement of the medical cannabis programme.[87]

Early media and anti-marijuana campaigns in the US offer students an excellent introduction into how framing of cannabis influenced global drug policy. The anti-Chicano movement of the 1920s generated a fertile ground for the emergence of a racially motivated 'war on drugs' and for the creation of a new drug hysteria.[88] In the US, since the early 20th century, drugs had become associated with minority groups: opium with the Chinese immigrant population, cocaine with African Americans, and cannabis with the Mexican immigrant population. The association of cannabis with Mexican immigrants promoted by the first commissioner of the Federal Bureau of Narcotics, Harry Anslinger, and also the media, was designed as a way of discouraging Mexican-American subcultures from developing. During the 1920s and 1930s, an interweaving of drug discourse and racist propaganda emerged.[89] Newspaper and magazine accounts of the drug problem consistently used negative images and framing to construct a highly fearful rhetoric about drugs.[90] Drugs, users and sellers were depicted as 'evil', and authors "often implied that there was a sinister conspiracy at work to undermine American society and values through drug addiction".[91] Cannabis was presented as a drug used by the Hispanic immigrant population, which caused in the smoker insanity, sexual deviance and violent behaviour towards victims, most typically represented as white American women.[92]

These early campaigns framed the cannabis user as an individual taken over by a demonic force, absent of volition and agency, and ultimately led into a world of violent criminality. As the drug

[83] Karl Lancaster et al., "Illicit Drugs and the Media: Models of Media Effects for Use in Drug Policy Research", *Drugs and Alcohol Review,* 30.4 (2011), 397-402

[84] Kaat Louckx and Raf Vanderstraeten, "State-istics and Statistics: Exclusion Categories in the Population Census (Belgium, 1846-1930)", *The Sociological Review,* 62.3 (2014), 530-546.

[85] Lancaster et al., *Illicit Drugs and the Media,* 397-402.

[86] Jane Mulderrig, "Reframing Obesity: A Critical Discourse Analysis of the UK's First Social Marketing Campaign", *Critical Policy Studies,* 11.4 (2017), 455-476.

[87] Sharon R. Sznitman and Nehama Lewis, "Is Cannabis an Illicit Drug or a Medicine? A Quantitative Framing Analysis of Israeli Newspaper Coverage", *International Journal of Drug Policy,* 26.5 (2015), 446-452.

[88] Steve Fox et al., *Marijuana is Safer: So Why are We Driving People to Drink?* (White River Junction, VT: Chelsea Green Publishing, 2013).

[89] Johann Hari, *Chasing the Scream: The Search for the Truth about Addiction* (USA: Bloomsbury Publishing, 2015).

[90] Susan L. Speaker, "The Struggle of Mankind against its Deadliest Foe: Themes for Counter-subversion in Anti-narcotics Campaigns, 1920-1940", *Journal of Social History,* 34.3 (2001), 591-610.

[91] Speaker, *Struggle for Mankind*, 591.

[92] Fox et al., *Marijuana Is Safer: So Why Are We Driving People to Drink?*, 45-56.

reformer Hobson warned "addiction and crime go hand in hand".[93] This is illustrated in Anslinger's anti-marijuana campaign, which describes a succession of drug-related crimes, concluding with the story of a LA youth high on cannabis. The framing of the story typifies the early construction of the link between the cannabis user and psychosis, and the demonisation of the cannabis user as crazed, dangerous and possessed by the 'evil' of the drug transforming him into a dehumanised, other-worldly form:

> Suddenly, for no reason, he decided that someone had threatened to kill him and that his life … was in danger. *Wildly* he looked about him. The only person in sight was an aged bootblack. *Drug-crazed* nerve centers *conjured the innocent old shoe-shiner into a destroying monster*. *Mad with fright*, the addict hurried to his room and got a gun. He killed the old man, and then later, *babbled* his grief over what had been wanton uncontrolled murder That's Marijuana![94]

The media drew heavily on the framing of the cannabis user in these campaigns as well as information produced by the Bureau. This is illustrated in an article published on 17th October 1933 in The Tampa newspaper reporting the story of Victor Licata, a young man who murdered his family while apparently high on cannabis, but was later discovered to have had a previous history of psychosis and several attempts had been made to admit him to hospital.

> CRAZED YOUTH KILLS FIVE MEMBERS OF HIS FAMILY WITH AN AXE IN TAMPA
>
> *Dazed* and staring *wild-eyed* [he] was arrested at the scene as officers broke in the home…. Licata was couched in a chair in the bathroom and offered no resistance as officers searched him for weapons. He *mumbled incoherently* when asked about the crime.
>
> W.D. Bush, city detective chief, said he had made an investigation prior to the crime and learned that *the slayer* had been *addicted* to *smoking marijuana* cigarettes for more than six months.

Entman argued that frames are fashioned by particular words and phrases that consistently appear within a narrative and "convey thematically consonant meanings across time" and that we can detect frames through looking for keywords, metaphors, concepts, symbols, and visual images.[95] The students were given 10 articles linking marijuana use and crime from the *New York Times*[96] published between 1930 (in the wake of renewed agitation for regulation of cannabis) and 1937, the point at which cannabis was being called America's newest drug menace and the Marihuana Tax Act was passed.[97] They were tasked with identifying how the Licata story and similar stories in the 1930s draw

[93] Hobson, "Peril", 4090; Brewster, "The Actual Trend of Drug Addiction and its Relation to Crime," *NE* (July 1927), 11-12; "The National Menace of the Narcotic Traffic", *Literary Digest* (24/02/1923), 35.
[94] Rowells, *On the Trail of Marihuana;* "Marihuana", *J. Home Economics* (30 Sept. 1938), 477-79; "Youth Gone Loco", *Christian Century* (29 June 1938), 812-13; Maud Marshall, "Marihuana", *American Scholar*, 8 (1939), 95-101; "One More Peril for Youth," *Forum* (Jan. 1939), 1-2; Harry Anslinger and Cortney Riley Cooper. "Marihuana: Assassin of Youth", *American Magazine*, 124 (1937), 18-19.
[95] Robert M. Entman, "Framing Toward Clarification of a Fractured Paradigm", *Journal of Communication*, 43 (1993), 53.
[96] *New York Times*, *www.nytimes.com*.
[97] Speaker, *The Struggle of Mankind against Its Deadliest Foe,* 594.

on the same phrasing. Additionally, they were shown the trailer from 'Reefer Madness', an anti-drugs exploitation film, dealing with 'the pitfalls of marijuana smoking', directed by Louis Gasnier in 1936.[98]

The students identified consistent lexical forms 'drug-crazed', 'slayer', 'incoherent', 'wild', framing the cannabis user as demonic, savage and violent, their agency arrested by cannabis, as the drug takes control of their actions, e.g. 'Drug-crazed nerve centers conjured the innocent old shoe-shiner into a destroying monster', and all volition is absent. The stories present cannabis itself with agency as 'a deadly menace' that it 'enslaves' the smoker. Both the newspaper stories and the campaign refer to the cannabis user as a threat to the innocent, e.g. 'dopsters luring children to destruction', or 'corrupting the youth', while the ultimate destination of cannabis use is murder, suicide or insanity. The students also note an optimal fear-inducing feature of these stories, and also the anti-cannabis campaign, is that the change caused in the cannabis user is represented as irreversible and the deterioration of the qualities of the person are complete, or whole.

The students then explored the re-emergence of the connection between cannabis, psychosis and crime in the 21st century.[99] In her study of the cannabis discourses in the period of cannabis reclassification in 2004 and the following year, Acevedo argues that the category of 'cannabis psychosis', which emerged around the time of reclassification as a class C drug, redefined cannabis as a contemporary moral panic, "its problems explained as an 'external' force taking over the individual".[100] Using Acevedo's work as a methodological springboard, the students were asked to compare the framing of the cannabis user in newspaper articles since the emergence of the link between cannabis and psychosis around the time of reclassification in the UK in 2004 with those from the 1920s and 1930s. To summarise briefly, using NexisUK, they collected media messages during two moments of the re-classification discussion: in January 2004, and between February 2004 and March 2005 from *The Guardian*, *The Observer*, *The Times*, *The Independent*, *Daily Mail*, *BBC online*, Scottish newspapers, and other media messages. They were tasked with addressing two questions: how the cannabis user is constructed, and whether/how discourses about cannabis have changed since the 1930's campaign.

The students again identified parallels in the representations of the cannabis user as 'deviant' during the two periods.[101] The cannabis user is still presented as a 'drug crazed' individual, e.g. "Widow's fury at officials who let crazed cannabis addict free to kill",[102] and the link between cannabis, psychosis and crime is maintained, e.g. "train-rage killer was schizophrenic cannabis-addicted gangster",[103] and the loss of agency is still prominent, e.g. "skunk cannabis had

[98] *Reefer Madness*, directed by Louis J. Gasnier, 1936. Trailer available at *flashbak.com*.
[99] Stanley Cohen, *Folk devils and Moral Panics* (St. Albans: Paladin, 1972).
[100] Beatriz Acevedo, "Creating the Cannabis User: A Post-Structuralist Analysis of the Re-classification of Cannabis in the United Kingdom (2004–2005)", *International Journal of Drug Policy,* 18.3 (2007), 177-186.
[101] Acevedo, *Creating the Cannabis User*.
[102] Richard Spillett, "Widow's Fury at Officials Who Left Crazed Cannabis Addict Free to Kill: New Father Was Knifed to Death SIX Days After Assault Case Was Dropped", *The Daily Mail Online* (11/10/2016).
[103] Martin Robinson, "GUILTY: Train-rage Killer Was Schizophrenic Cannabis-Addicted Gangster with 30 Convictions Who Psychiatrist Had Ruled Was NO DANGER to Himself or Others – Just 24 Hours Before He Stabbed Father 18 Times in front of His Son, 14", *The Daily Mail Online* (13/07/2019).

altered his brain to make him believe he was being followed by MI5".[104] The media representation of illicit drugs as one of criminal choice rather than one of a health issue is also maintained and continues to play a role in the moralising and ostracism of drug users from wider society.[105] In addition, these contemporary articles demonstrates intertextuality, i.e. the notion that texts have histories, that they are an amalgam and an echo of 'past' texts,[106] realised in the linguistic features.[107] The most pertinent finding is that cannabis discourses established in the 1930s, which represent cannabis through criminal and mental health discourses and criminality were predominant over 60 years later during a brief moment of liberalisation of the UK drug laws.

To contextualise the students' analysis, as a group, they discussed Acevedo's article in order to compare their own analysis with her findings of the 2004-2005 newspapers reports.[108] In describing 'cannabis psychosis' and its associated problems attributable to an external agent, Acevedo explains that justification is provided for the special powers of the 'addiction doctor' required to fight the evil while providing the user with an alibi of loss of agency, a framing that promotes the moral panic. This is heightened by framing stories as attribution of blame. In responding to Acevedos' point, students re-analysed the articles and identified reports involving attribution of blame in 'cannabis psychosis' related articles. Their findings show that these stories consisted of family members' statements about 'increasing concern' about the individual's behaviour in the context of clinical inaction, emergency services failing by providing 'chaotic response',[109] 'whitewashing'[110] of investigations aiming to determine blame, while portraying the National Health Service Trusts and social services as overburdened, incompetent and ultimately accountable. The moral panic is reinforced by Care in the Community schemes, i.e. supported patient accommodation in the community, being portrayed as inadequate protection for the public against 'dangerous' individuals with psychotic disorders, while 'negligent' authorities fail to provide adequate support or monitoring of patients in such accommodation. The students conclude that by merging the conceptualisation of cannabis use and psychosis, the legitimacy of the government's responsibility towards the psychotic patient risks being undermined as the moralising of the cannabis user begins to permeate the discourse of psychosis.

This demonization, castigation and social exclusion of the cannabis user is striking when compared with the symbolic framing of different substances and substances users. Illicit drugs are comparatively more stigmatised based on the social location of their users:[111] those without power and status are disproportionately vilified and linked to deviant behaviour. This point was presented to students and illustrated through the example of the 2019 leadership contest of the Conservative party,

[104] "The Shocking Toll of Attacks Linked to Drugs", *The Scottish Daily Mail* (05/19/2017).
[105] Stuart Taylor, "Outside the Outsiders: Media Representations of Drug Use", *Probation Journal,* 55.4 (2008), 369-387.
[106] Mikhail Mikhaĭlovich Bakhtin, *Speech Genres and Other Late Essays* (Austin, TX: University of Texas Press, 2010).
[107] Norman Fairclough, "Discourse and Text: Linguistic and Intertextual Analysis within Discourse Analysis", *Discourse & Society*, 3.2 (1992), 193-217.
[108] Acevedo, *Creating the Cannabis User.*
[109] Jamie Grierson, "Sister of UK Man Who Died in Custody Hits out over Mental Health Services", *The Guardian* (11/10/2017).
[110] "The NHS Said This Schizophrenic Hooked On Cannabis Posed No Danger: Weeks Later", *The Daily Mail* (London, 06/10/2010).
[111] Rebecca Haines-Saah et al., "The privileged Normalization of Marijuana Use: An Analysis of Canadian Newspaper Reporting, 1997-2007", *Critical Public Health*, 24.1 (2014), 47-61.

when a succession of senior politicians willingly admitted trying illicit drugs, including cannabis and opium. One candidate, MP Dominic Raab stated that not only should such a mistake not disqualify any candidate, but that one candidate, Michael Gove, should be commended for his honesty in confessing his experimentation with cocaine. He stated: "I certainly don't see it barring him from this race in any way... I rather admire his honesty".[112] Evident here is that the relationship between concepts of addiction and prohibition and particular drugs are constructed by social actors and institutions based on attitudes towards particular drugs and drug use, and the type of drug user.[113] The representation of cannabis by the media has important health policy implications in light of the ongoing political discussions concerning the medical cannabis programme, the merits of decriminalisation of cannabis more widely, and the need for public health and harm reduction approaches to illicit drug use.[114]

*3.4 Reforming medical cannabis legislation*

In November 2018, the UK government announced an amendment of UK legislation on cannabis-based products allowing its use on prescription in cases where the clinical needs of patients cannot be met by licensed medicines. The government argued that this was part of a plan to ensure that those in need of treatment would benefit from the advances in medical cannabis. In the next task, the students analyse one document, a statement by the Secretary of State for the Home Department, Sajid Javid, published on 11th October 2018,[115] in which he announces the government's decision. This text was chosen as it represents the government's response to the media attention to the Billy Caldwell case, and similar concurrent cases, in which the government sets out their updated position. We focus on one text in detail because it tells us what the government believes to be important about the medical cannabis reforms in the context of a conflict between growing calls for advancement of the medical cannabis programme and its own well-established prohibition stance.

The students use Fairclough's (1989, 1995) three-level model and conceptual framework of Discourse Analysis,[116] relying on a linguistic analysis of texts, especially Halliday's (1985/1994) Systemic Functional Linguistics (SFL).[117] Fairclough's CDA approach is fundamentally interested in analysing structural relationships of dominance, discrimination, power and control manifested in language, and aims to critically investigate social inequality as it is expressed, constituted, legitimised, and so on, in discourse.[118] This model for CDA is a synergy of three interrelated processes of analysis tied to three interrelated dimensions of discourse. These three dimensions are: 1 the actual text

[112] Mattha Busby and Damien Gayle, "Michael Gove Admits to Taking Cocaine on 'Several Occasions'", *The Guardian* (08/06/2019).
[113] Craig Renarman, "Addiction as Accomplishment: The Discursive Construction of Disease", *Addiction Research and Theory,* 13:7 (2005), 307-320.
[114] Rebecca J. Haines-Saah et al., "The Privileged Normalization of Marijuana Use – An Analysis of Canadian Newspaper Reporting 1997-2007", *Critical Public Health,* 24.1 (2014), 47-61
[115] Sajid Javid, *Cannabis-based Products: Medicinal Use, Hansard* (11/10/2018), *Hansard.Parliament.Uk.*
[116] Norman Fairclough, *Language and Power* (London: Longman, 1989); *Critical Discourse Analysis* (London: Longman, 1985).
[117] Michael AK Halliday, "Systemic background", *Systemic Perspectives on Discourse,* 1 (1985), 1-15; *An Introduction to Functional Grammar* (London: Edward Arnold, 1994).
[118] Weiss Gilbert and Ruth Wodak, eds., *Critical Discourse Analysis* (New York: Palgrave Macmillan, 2007), 15.

(discourse-as-text); 2 the processes by means of which the object is produced and received by human subjects (discourse-as-discursive practice); and 3 the socio-historical conditions which may have influenced the creation of the texts (discourse-as-social practice). For Fairclough each inter-related dimensions requires a distinct type of analysis, which takes into consideration the underlying socio-cultural and power structures in society: 1 text analysis (description); 2 processing analysis (interpretation); and 3 social analysis (explanation). Fairclough states that there is a continual movement between the descriptive, interpretive and explanatory levels of analysis. A summary of the most salient points identified by the students in regard to the question of interest (i.e. What does the government believe to be the important issue in the medical cannabis reforms?) are summarised below.

Cannabis is never referred to as simply 'cannabis' but always as "cannabis based product for medicinal purposes", which distances it from "the recreational use of cannabis". This is reinforced with multiple assurances of regulation in clauses that modify or act as concessions to parts of the new legislation, e.g. "to ensure that patients have access to the most appropriate course of medical treatment", and "while ensuring that the appropriate safeguards were in place to minimise the risks of misuse and diversion". The amendment is caveated throughout with subordinate clauses to reassure the audience(s) that despite this rescheduling, prohibition against the dangers of abuse, harm and misuse remains intact.

In delivering the process for the decision, Sajid Javid presents a series of sentences using the first person pronoun 'I': "I announced a two-part review"; "I have been clear that my intention was"; "I stressed the importance of acting swiftly"; and "I have been clear that this should be achieved at the earliest opportunity". This gives the impression of authority and decisiveness in the decision rather than a case of the government yielding to media pressure or showing negligence in respecting the public desire for maintenance of the 'war on drugs'. The use of the present perfect "I have been clear that my intention was always to ensure that patients have access to the most appropriate course of medical treatment" suggests this is part of a long-term noble endeavour to promote health rather than a response to public scrutiny driven by media attention, which in turn triggered the review by the Chief medical advisor.

According to the text, it is a government decision motivated by the 'commitments' of the Secretary of State, and with input from various experts, including the chief medical adviser to the UK Government and the Advisory Council on the Misuse of Drugs (ACMD). The opening line of the text announces the government as agents of the action, but draws heavily upon the backing of scientific expertise as the basis of scientific knowledge upon which the decision was been made, e.g. "Building on the expert advice we have received, first from the chief medical adviser to the UK Government and then the Advisory Council on the Misuse of Drugs (ACMD), the regulations we have laid today give effect to my commitments". This seems designed to mitigate any potential accusation of this decision being a step toward the decriminalisation of cannabis or the promotion of its use, misuse or abuse. The students noted that the ACMD is in fact a Quasi-Autonomous Non-Governmental Organisation (QUANGO), in other words, a semi-public administrative body outside the civil service that receives financial support from the government. The 'neutrality' of QUANGOs have frequently been called

into question for various reasons, but primarily because their appointments, often made by government, are accused of being highly political. For example, in 2009, the chair of the ACMD, Professor David Nutt, was asked to resign following the publication of a paper in which he claimed that alcohol and tobacco were more harmful than many illegal drugs, including LSD, ecstasy and cannabis.

In stating that "While the evidence base further develops and clinical expertise builds", the Home Secretary suggests a body of scientific evidence supporting this view exists. This is inconsistent with the limited research that has been carried out on the effects of cannabis due to prior legislation and robust positioning against the advancement of the programme. The expression 'further develops' belies the paucity of research into medical cannabis and the obstacles to research being carried out, while still falling short of making a commitment to future research. Importantly, Sajid Javid maintains that it is the drug users who are the problem, not the drug itself, when he states that they will "take account of the particular risk of misuse of cannabis by smoking and the operational impacts on enforcement agencies, the 2018 regulations continue to prohibit smoking of cannabis, including of cannabis-based products for medicinal use in humans". However, the statement neither mentions the potential for cannabis addiction nor offers any contingency plans for therapeutic intervention should it be an unwanted consequence of the reforms, perhaps an important consideration given the opioid crisis. By omission, the problem of addiction is left in the criminal domain.

The medical cannabis discourse is held in place by integrating the discourse of regulation with the discourse of prohibition, concerned primarily with the 'ensuring of safeguards', 'strict control', and 'unintended misuse and diversion'. This is reinforced by the repeated reference to 'existing medicines framework' and 'well-established mechanisms'. The commitment to prohibition is maintained and the introduction of medical cannabis is accompanied by assurances of stringent regulations and the clear rejection of possible expansion of cannabis for recreational purposes, described here as 'misuse', 'harm' and 'diversion' from the programme. The mixing of these two discourses reiterates the distinction between the use of cannabis for medical use and that for recreational use in order to provide assurances for its commitment to the 'war on drugs'. Available was an opportunity to discuss medical cannabis as an advance in medicine and one that would serve the needs of thousands of people. Yet a notable absence is any mention of the value of cannabis-based products in the alleviation of otherwise non-treatable illnesses. This is important given the motivation for the review that has led to this amendment and suggests a lack of long-term commitment by the Government to the programme.

The importance of the regulation discourses is to project a sense of governmental control over the situation rather than representing a slippery slope into an advancement of the cannabis programme in recreational terms. Those who abuse and misuse drugs are still presented as posing a threat to a civil society. The invoking of the regulation discourse ensures this new legislation is safely embedded in present prohibition practices of robust controls that maintain the 'war on drugs' and offer legal protections from illicit drugs. The prohibition discourse in the text constructs medical cannabis as something that must be treated with caution, reviewed, regulated and highly controlled in light of the persistent problems with illicit drugs.

## 4. Conclusion

This paper has presented an example of how DA can be used in the BMS curriculum to help students develop a more critical approach to understanding bioethical issues within historical, political and ideological contexts. The aim was not to provide a full-scale exploration into DA, but simply offers a sequence of tasks that have introduced BMS students to some of the techniques, the underlying philosophical assumptions, and the key theorists whose work motivates DA today. More specifically, students were given the opportunity to investigate how prohibition discourses have influenced perceptions of cannabis and the cannabis user in order to understand one aspect of the motivation for the UK medical cannabis health policy. No attempt has been made to challenge the pharmacological discussion, which was a springboard into exploring this topic. We have been interested in drug discourse, the historical conditions that have supported the subject positions that exist today and continue to influence policy. This series of tasks allowed students to discover that effects of framing can be brought about by often small changes in the presentation of an issue, resulting in a relatively large impact on public opinion,[119] but also that representation of socially constructed problems can shift in time.[120]

Time will tell if the predominant cannabis discourses will continue to represent cannabis through 'traditional' legal/criminal and mental health discourses that dwell on issues of criminality,[121] or whether discourses will become influenced by the government's acknowledgment of the financial potential in the development of the medical cannabis programme. As the global cannabis markets expand, those institutions and social actors in the UK leading global medical cannabis exportation will surely benefit from a reconceptualisation of the cannabis user for the purpose of benefiting from the potential of UK markets. Introducing BMS students to DA approaches provides them a means of exploring texts that provide a barometer of such potential sociocultural changes.

[119] Dennis Chong and James N. Druckman, "Framing Theory", *Annual Review of Political Science,* 10 (2007), 103-126.
[120] Ibid.
[121] Acevedo, *Creating the Cannabis User*.

Giuseppe De Riso, *Affect and the Performative Dimension of Fear in the Indian English Novel: Tumults of the Imagination* (Newcastle Upon Tyne: Cambridge Scholars, 2018), 115 pp., ISBN: 978-1-5275-0605-3

*Reviewed by* Maddalena Carfora

Sentiments of fear and submission to power are common factors among ethnic and religious communities which endured the experience of colonization. Drawing on the theoretical framework of performative and affective studies, Giuseppe De Riso's *Affect and the Performative Dimension of Fear in the Indian English Novel: Tumults of the Imagination* brings forward a sharp critical analysis of three literary works dealing with episodes of ethnic violence in the Indian sub-continent to question the role played by fear and similar sentiments in the emergence and development of cultural identity.

The critical reading of Khushwant Singh's *Train to Pakistan* (1956) focuses on the violent consequences of the spreading rumour during the Partition of 1947, when India gained its independence from Britain. More specifically, De Riso discusses the power of rumour to break the mutual trust that Hindus, Sikhs and Muslims had been enjoying for decades by virtue of what could at first sight be considered its weakness: its unverifiability. In Singh's novel, rumour emerges as a potent instrument for the creation of insecurity among ethnic communities.

Indeed, during Partition made-up stories of violence, massacres, and reprisal on ethnic and religious grounds involving Sikhs, Hindus and Muslims were made to spread to serve particular political interests in order to set up a community against the other. Their persuasive force relied on an opaque indeterminacy which fatally blurred the boundary between truth and invention. In fact, such fabrications hijacked feelings of fear for one's own safety to ignite imaginaries of danger and insecurity, creating enemies, even where there weren't any, as well as a persistent and recursive clime of terror demanding acts of indiscriminate vengeance or retaliation.

The second novel discussed in the book is Neel Mukherjee's *The Lives of Others* (2014). The period taken in consideration here are the decades immediately following Partition, a time in which India was undergoing those profound transformations which would supposedly bring it out of its feudal past and into 'modernity'. De Riso's main contention in this chapter is that the restructuring of social relationships and hierarchies happened under the influence of paranoiac feelings which strongly participated in reinforcing intimate contradictions present in Indian social tissue and which is particularly apparent in the contrast between the urban and the rural areas of India.

The novel deals with the Naxalbari rebellion going on in West Bengal in the late 1960s to consider how the feudal structure of exploitation, then rampant in India, thrived on the promises of national modernization. Supratik, the well-educated urban revolutionary at the center of the novel, agrees to go among the peasants living in rural areas upset by their inhuman living conditions and the abuses they

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have been enduring at the hand of landowners and moneylenders and their monopolistic practices. By becoming one of them, by living 'the lives of others', he hopes to improve the life conditions of the oppressed. Yet, in doing so, he soon comes to realize that the problem with India's social inequalities lies not just in uncaring institutions, but also in those very people who, like him, declared to be actively concerned with defending the oppressed. For example, he is forced to acknowledge that even the Communist Party of India, which he represents and which is vocally engaged in protecting the underprivileged, did not actually care about them, but uses the poor only as an excuse to pursue its own interest. In fact, it secretly sustains a repressive apparatus aimed at stifling the Naxalite movement, whose action in defence of the poor seriously threatens its political rise to power. The party, which nurtured stereotypes drawn on a western vision of time, which tended to present those living at the margins of India, at the periphery of urbanization, as backward-looking people hindering Indian development.

De Riso's rigorous analysis deconstructs the ambiguities and contradictions of such a process of 'internal Orientalism', as it appealed to the paranoiac projections of that part of India which had accepted globalization onto exploited farmers and land labourers, whose claims for a more equal distribution of wealth and the preservation of ethnic diversity were seen as a hindrance to the development of the nation. Such playing on fears produced by unequal financial and cultural living conditions made it justifiable the repressive use of corrupted police forces, who exploited the incongruities within the Indian legal system to take violent measures against rebels.

In the third chapter of his volume De Riso offers a keen reflection on Rohinton Mistry's *A Fine Balance* (1995), as it deals with the Indian Emergency of 1975-1977 as an event in which biopolitics of bodily control and sexual reproduction contagiously spread sentiments of victimhood and blame among people belonging to different social classes, in a parasitic system in which individuals exploited weaker subjects to secure their own safety or privileges. As De Riso outlined, Emergency is mostly remembered for two crucial points: Family Planning and Beautification of the Environment, in which Indira's son Sanjay played a pivotal role. While this political programme was intended to enhance the condition of the poor, it created a "chain of victimhood" (92) or "structure of exploitation" (97), often symbolised in the novel with the metaphor of the worm, whereby a predatory downward spiral of violence and exploitation ultimately ended up keeping the poor better in check and under control to the benefit of wealthier and more powerful social classes.

For example, police officers tried to ingratiate themselves to political leaders by forcing people to undergo sterilisations on false or dubious charges. Emergency entailed such a "regime of discipline" (95) as outlined during political campaigns, effectively fostered by sentiments of fear. In the novel everyone tries to prevent 'their turn to come' through any kind of compromises. De Riso discusses some key concepts, such as "bodily confinement" (100) and "bodily reduction" (104), which are crucial to understand such dynamics of oppression exerted within Indian social tissue. The first is related to the threat of 'being infected' by the ones belonging to lower classes considered as "carcinogenic"(103) ones. An instance is readily identifiable in Dina's behaviour in regard to Om and Ishvar when she attempts to prevent them sharing kitchen tools with her. Her actions depict the effect

of some widespread cast prejudices that politicians employ by means of manipulation, in their turn, to reinforce the idea of 'supplying' the best solutions for providing society's welfare. The latter is brought forward by practices of sterilization staked by biopolitical work in order to control people's bodies and prevent a nation from "outgrowing itself" (94). Such practices are not equally distributed across social classes, but especially addressed to the weakers, such as the Untouchables. The process of 'reduction' refers not only to the body of the poors and their reproduction but also to the body of the nation itself. It was a specular reduction, put in place also by the effective destruction of Indian slums. In this case another example of 'political collaborators' besides police officers is easily identifiable in the figure of "sanity inspectors" (101) who act by virtue of India beautification, while destroying "anything and anyone" (101) which lie ahead of them. As it can be observed, the two first isolated points of the Emergency programme actually blended and ran in parallel. In such state of affairs, in the novel are also depicted some ambiguous characters, such as the Beggar Master who, for his part, exploits the situation to his own advantage by monitoring almsgiving activities of "maimed people" (102) who return from irrigation camps.

By exploring the significant consequences of Emergency's years for people's conscience and awareness, De Riso shrewdly referred to the concept of the 'chain' in order to showcase both such a burdensome control of social life enacted by political operations and the way in which the terror of being 'reduced' affects people's action and behaviour. Indeed, similarly to what happens between the links of a chain, sentiments of victimhood and blame are sequentially disseminated among people.

The figure of the chain and its structure may also be associated with the salient peculiarity of that political programme, distinguished by its structural circularity. Just as links are perpetually connected to each other, so things and events involved in such an autartich circle are both linked and influenced by the previous ones. Indeed, even the novel's constitution is tangled in a circular loop. This formal feature induces it to perform as "a sinister recursivity" (83), which both follows and anticipates the events in the novel. Inevitably, no way to escape from this "circle" (105) is provided, as it can be seen on the one hand with the final "physical reduction" (104) of Om and Ishvar and on the other hand with the closing scene of Maneck's suicide; the latter can be considered as the 'keeper' of such a loop, because a similar event affects the opening of narration.

Riding some of the bloodiest 'tumults of the imagination' which shook the subcontinent, De Riso's *Affect and the Performative Dimension of Fear in the Indian English Novel* elucidates the pivotal role of fear in influencing cultural beliefs as well as individual or collective behaviour, either through misrepresentations of reality, or by nurturing sentiments of rage and revenge which make violent actions appear as necessary.

Roxanne Barbara Doerr, *Communicating Professions via Blog. An Applied Linguistics Approach* (Munich: Grin Verlag, 2019), 105 pp., ISBN: 978-3346074652

*Reviewed by* Santo Michael Orefice

Roxanne Barbara Doerr's *Communicating Professions Via Blog: An Applied Linguistics Approach* offers a great contribution to the fields of applied linguistics with regards to a well-known and widespread type of digital channel that is used in the workplace: professional blogs.

Doerr, in the introductory chapter of the volume, starts by observing that we are living in an increasingly digital and globalized world where the use of Information and Communication Technologies (ICT) is usually required in workplaces, since the professional profiles are changing. In addition, the so-called phenomenon of the "domestication of technology" (5) that David Barton and Carmen Lee defined consists in the use of digital technology in everyday life and domestic contexts and has led to the "dematerialisation of the workplace" (6). Thanks to this process, individuals can discuss work issues on social media.

In this introductory chapter, the scholar continues by providing an ongoing definition of blogs and their main features. Blogs, a term attained by shortening the word "weblogs", are digital spaces in which a writer or group of writers share their views on a topic with an audience. Blogs are distinguished by some rather recognizable features: they are digital "containers", personal Internet pages that occasionally invite readers to comment and are usually organized in reverse chronological order and may be enriched with various material such as links to other sites, articles, images and videos that are available on the net, as well as pdf files, references, essays, slides and manuals (8-10). Based on the findings of Granieri, Doerr defines professional blogs as democratic spaces "for alternative perspectives that allow marginalized and displaced professional figures to become aware of the weight of their role" (11). As a result, a blog, according to the author of the volume, is a dynamic digital space characterized by maximum freedom of expression and "a widely accessible point of reference and knowledge dissemination for developing fields and issues" (6).

Doerr devises a theoretical framework based on Critical Discourse Analysis (CDA) and Multimodal Discourse Analysis (MMDA) in order to produce a collection of applied linguistics studies on professional blogs that was presented at and expands on the discussions that took place at three international conferences By means of a methodological framework combining analyses on multimodal, textual, discursive, linguistic and rhetorical levels of professional blogs in three very different sectors, the aim of the studies is to understand how professional discourse and blogs have adapted in order to express the evolving needs of certain professions and categories, since the mobility of employees and professionals follow the technological innovations in communication. Each chapter

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of the volume deals with a different online professional community not only to analyze trends and developments in the professions behind these online communities, but also the bloggers' interaction with their audiences in communicating professional content.

The first chapter of the volume begins with a description of how the profession of office workers has undergone a change in image, thus becoming a sort of "office worker 2.0" (19), thanks to technological innovations that allow professionals to share their thoughts, ideas and resources about work issues on social networks. Drawing on CDA and MMDA, Doerr offers a qualitative and empirical three-level analysis of four blogs written for and by office workers, a professional category that is often perceived as being stale and unexciting. Two of these professional blogs, written in English by native English speakers, relate to the fields of employee health and safety, while the other two focus on office life and lifestyle. Doerr firstly focuses on the use of visual images and colours, multimedia content and social network connections by these professional blogs in order to trace the image of empowered office workers that they convey and the ways in which they connect to other social media to spread their content. Secondly, the scholar describes how textual coherence is realized in bloggers' bios and introductions by means of specific linguistic devices that allow office workers to present themselves both as professionals and as individuals. Thirdly, Doerr emphasizes the difference between the language of the bloggers' posts and that of the comments that are written by the audience with the clear intent of revealing how bloggers communicate their will "to create and empower the online community and/or contribute to the dissemination of its knowledge" (37).

The second chapter concerns the branch of media psychology, which is difficult to define due to its high level of interdisciplinarity. Media psychologists, in Doerr's words, have skills in so many fields that they are comparable to teachers, researchers and managers. Through professional blogs, they disseminate scientific information not only on the presence, but also the potential dangers, of the use and abuse of social media. This chapter adopts CDA to analyze the bloggers' self-presentations and the title of their posts in four different media psychology blogs. Although all these divulgative blogs use colloquial language to demonstrate that the bloggers have been through the same experiences as their readers, Doerr argues that the bloggers have assumed different views on media. These range from being hopeful and positive, thus considering blogs a modernized form of therapeutic practice capable of spreading messages and ideas that encourage the development of society, to having a negative approach to media because of the harmful effects and the control they exert over society, to taking a more professional stance and exploring media's potential for "professional activities that are not strictly connected with media psychology" (70), such as online teaching and business. In outlining such differences in attitude, the study in this chapter emphasizes the interdisciplinarity that is typical of the branch of media psychology.

The third chapter, dedicated to the online military community, opens with a research question "regarding the US military community's conception of communication, identity and reputation and how it diverges from civilian institutions" (80). Doerr points out that the military is an exclusive community made up of many members that follow a unique "military culture" and have to adapt to different places and situations. The exclusivity that is typical of the military community is mirrored in

its particular relationship with civilians, who generally know little or nothing about the activities of the military. A comprehensive textual, discursive and linguistic examination of four online military communities therefore allows the scholar to reveal that these professional blogs have the underlying intention of promoting positive values and practices and disseminating knowledge within the military community. Moreover, Doerr analyzes how the bloggers employ linguistic, discursive and rhetorical devices in order to foster the military community's reputation and organizational identity. The scholar concludes by shedding light on the existence of other possible lines of research in the field of military community discourse.

Doerr's volume concludes by delving into the development of these blogs in the years and its connection with changes within the analyzed professional communities. The study argues that blogs, as spaces with extensive freedom of expression, are a popular and adaptable online genre that can appeal to a wide range of viewers, whether they are experts or not. First of all, through the analysis of the professional blogs of office workers, the scholar draws attention to the change in meaning of the term "office", which cannot be merely considered a confined working space in the contingent era of "coworking" and "workshifting". As regards the second study, Doerr concludes that, since almost all of the analyzed blogs are still active, they are still considered popular and reliable sources in the field of media psychology. Finally, Doerr points out how the graphics of the milblogs have changed, especially in the greater attention to the presentation of bloggers and guest bloggers, whose presence is justified by the credentials of their profile. Unlike the office worker blog or the media psychologists' blogs, the military blogs and its reputation represent a perfect mixture of the values of each individual member and the unity of the team of bloggers. The military community has also started using forums to allow professionals to better adapt their advices to non-experts' specific situations.

# Notes on Contributors

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