BOOK REVIEW

Deceitful Media: Artificial Intelligence and Social Life after the Turing Test, Simone Natale (2021) 191pp., £20 paperback, Oxford University Press, New York, ISBN: 978-0190080372

In the scenario that sees the spread of enthusiastic, solutionist rhetoric about artificial intelligence (AI), Simone Natale's *Deceitful Media* is a real breath of fresh air. Not that cultural studies about AI are a new thing, but (among calls to materialism and socio-political approaches) what was missing was consideration of human–machine communication as essential to the development of knowledge and practices of AI. As the author argues, the long sustained separation between the fields of AI and human–machine communication is misleading, since the very idea of AI is historically, socially and epistemologically dependent on imagining a machine interacting and communicating with humans. A machine can show intelligence not only because it is interacting with humans, but also because communication (especially in its linguistic meaning) is itself one of the central representations of intelligence. It is not by chance that the form through which AI has gained a foothold in the contemporary world is that of speaking machines, such as the so-called 'voice assistants' embedded in smartphones and smart speakers. Voice is traditionally considered to be what makes humans human, so our imagination projects onto a machine endowed with voice the other characteristics of humanity as well, intelligence *in primis* (Dolar, 2006). From the very beginnings of AI, coming immediately after computer science, natural language has been considered the paradigm inspiring the attempt to produce an intelligent machine (Bianchini, 2007). At the same time, intelligent machines have been imagined as possessing a voice since the beginning of technological modernity, both in the scientific milieu and in popular representations, from novels to cinema (from *2001 A Space Odyssey* or *Star Wars* to *Her*).

Given such premises, Simone Natale suggests that a better way to investigate AI is to inscribe it within the genealogy of modern communication media, adopting the analytic and critical tools of media studies, cultural studies and media history. He does not explicitly refer to media archaeology as an influence, but readers familiar with the work of such authors as Erkki Huthamo and Jussi Parikka (2011) will definitely find connections. The central assumption is that AI is a social and historical phenomenon constructed through intertwining knowledge, imaginaries, narratives, desires and material operations. This is something scholars in media studies and science and technology studies have long argued, but what Natale adds to the frame is an anthropological consideration that the assemblage is kept together by the human's liability to be deceived. In a very original and brilliant way, he finds in the concept of 'banal deception' a vital driving force of the technological development of the last century.

Natale's core thesis is that deception is not just a side effect or a possible malicious use of AI, but a constitutive element of modern media. All media, in fact, draw on deceitful effects: the cinema gives the illusion of moving images through the fast succession of still images, stereo hi-fi creates the effect of tri-dimensional space simply through two loudspeakers, and so on. AI is no different; it is a range of technologies that provide an illusion of intelligence, 'the creation not of intelligent beings but of technologies that humans perceive as intelligent' (p.3). It inherits many of the dynamics and structures that have characterized mediated communication. This is why 'to understand new technologies such as AI voice assistants or chatbots, it is vital to contextualise them in the history of media' (p.12).

At this point, the author warns us that deception is not just a matter of phenomenology; it is also a matter of epistemology. To exploit humans' liability to be deceived, a whole new set of knowledge is required, which entails a study of the psychology of perception, social behaviours,

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cultural expectations. To create the illusion of AI, computing technologies draw on specific aspects of users' perception and psychology. AI scientists have incorporated user knowledge into their efforts to build meaningful and effective interactions between humans and machines. At the same time, that very knowledge has been socio-historically produced within the framework of AI, according to specific desires, imaginaries and interests. As a consequence, 'the key event of media history since the nineteenth century was not the invention of any new technology … It was instead the emergence of the new human sciences' (p.12). Paradoxically, the attempt to produce a machine that emulates human behaviour has created a new epistemic definition of humans themselves.

In this framework, Natale introduces the concept of 'banal deception' as a set of mechanisms and practices embedded in media technologies and contributing to their integration into everyday life. Beyond moral judgements or ontological claims that aim to draw a sharp line between what is deceitful and what is not, banal deception claims that the functional role of deception in everyday social interaction and communication should be recognised. 'Banal deception entails mundane, everyday situations in which technologies and devices mobilize specific elements of the user's perception and psychology – for instance, in the case of AI, the all-too-human tendency to attribute agency to things or personality to voices' (p.7). In the framework of banal deception, users are not maliciously tricked; for example, being induced to believe that AI thinks or feels like a person. Rather, they are encouraged to accommodate existing social habits and behaviours so that they can better incorporate AI into their everyday life without trauma, making AI more meaningful and useful to them.

This consideration becomes crucial in a contemporary scenario where AI technologies are increasingly employed in every aspect of our lives, from entertainment to information, from economy to governance and decision-making. AI technologies need to be perceived as reliable and non-threatening. Relying on humans' tendency to project social attributes onto artefacts, banal deception makes it possible to invest AI with positive values, such as trust. Studies in human–computer interaction, for example, show that users interacting with computers apply norms and behaviours that they would adopt with humans, even if these users perfectly understand the difference between computers and humans (Reeves and Nass, 1996).

Voice assistants are a significant example of this dynamic. Personifying machines through voice, they do not deceive users into believing that a person is speaking instead of a computer. Rather, they rely on human tendency to project identity and humanity onto artefacts in order to make the interaction with computers more confidential and smoother. On the other hand, though, the 'humanity performance' they enact through 'natural-sounding' voice expression (Napolitano, 2020) allows them to conceal the operations of data extraction that happen during voice interactions and that fuel the 'surveillance capitalism' of the new data economy (Zuboff, 2019). Through the familiarity of voice communication and the *habitus* that associates voice with personality, banal deception introduced by this technology does not aim to make users believe they are interacting with an intelligent technology, but aims to allow users to operate a 'narrative identification' of the communication partner (Faber, 2020). This social dynamic is a crucial tenet of any communication, be it with humans or machines. For successful communication, people have to draw on distinctive elements that suggest they are interacting with a singular persona, such as a recognizable voice, a name, a consistent language. From the user's point of view, a persona is above all an imagined construction, conveying the feeling of a continuing relationship with a figure whose appearance can be counted on as a regular and dependable event and is integrated into the routines of daily life. This attempt is behind the choice of names and characters for the personal assistants.

As Natale emphasizes, it is essential not to forget that the appropriation of the dynamics of banal deception gives developers and technology companies the power to affect and manipulate the deeper structures of our social lives. 'Organizations and individuals can exploit these mechanisms for political and marketing purposes, drawing on the feeling of empathy that a humanlike assistant stimulates in consumers and voters' (p.128). In the light of 'surveillance capitalism', according to which 'behavioural surplus value' can be extracted from the constant monitoring and tracking of

users' activities (Zuboff, 2019), one of the consequences of voice assistants' banal deception is the extension and expansion of monitoring and data gathering about social behaviours to as many contexts as possible, including intimate and domestic situations. The use of the assistant metaphor, as well as the preference for designing assistants endowed with gendered voices, usually females, can probably be read in this framework: studies in human psychology relate the female voice with positive feelings which can enhance trust, empathy and familiarity (Nass and Brave, 2005) and enable users to avail themselves of technology as much as possible, and as a consequence to contribute more data.

However, we should ask ourselves if the knowledge on which design decisions are made is not biased in the first place. In a society where technology companies have large interests and large instruments to conduct research with private means, the risk is that a significant amount of knowledge is not negotiated with the scientific community, but is simply imposed through techno-political power. This knowledge can be affected by deterministic biases or epistemological naivety, which would be reproduced in the form of design as well as of decision-making.

I think this tension, inherent in the relationship of media, knowledge and society, is worthy of great attention. For its part, this book contributes to the unearthing of these dynamics through historical and archaeological investigation. It clarifies, for example, the position of Alan Turing in the milieu of cybernetic science in the 1950s. Turing is commonly considered the father of AI and the leading exponent of the cognitivist thinking that argues that the mind operates by performing purely formal operations on symbols. Mental activity can be reproduced computationally. Following this tradition, Turing is associated with the Strong AI development project, which aims to create machines that act intelligently instead of simply simulating the effects of intelligence. Through his historical and epistemological reconstruction, Natale sets some order in this and offers a series of surprises. Despite numerous critics, Turing's Imitation Game is for Natale the foundational act of AI, not because it sets the measure of the intelligent behaviour of machines by comparing it with that of humans, but rather because he understands that the very possibility of a thinking machine depends on the perspective of the observer. With this move, Natale shows us how Turing is much closer to a behaviourist approach to AI than one might expect. 'The question, Turing tells his readers, is not whether machines are or are not able to think. It is, instead, whether we *believe* that machines are able to think – in other words, if we are prepared to accept machines' behavior as intelligent' (p.20). The machine's intelligence does not reside in the machine itself, but in its interaction with the user, and is thus a social phenomenon.

This behaviourist approach was conceptualized in radical terms by Joseph Weizenbaum when he conceived the chatbot ELIZA in 1964. Weizenbaum intended to highlight the deceptive capacity of computers by designing software that simulated the effects of intelligence through socially characterized communicative behaviours. In a certain sense, he wanted to deconstruct the deceptive bases of AI, showing its limitations and unveiling the mechanisms that preside over the desire to project humanity onto machines. Nevertheless, ELIZA was a great success for the opposite reason as it was seen as a demonstration of the progress of AI research. As Natale points out, two elements contributed to ELIZA's achievement. First of all, Weizenbaum's understanding that our perception of the identity of a conversation partner is crucial to the credibility of any human interaction and accordingly to the design of a computer program endowed with the traits of a persona with a conversational role. Second, the influence of an AI narrative that emphasizes the amazing results of techno-science in creating intelligent machines. This aura around AI was actually a narrative effect fed by both exaggerated descriptions of scientists of their results and by the material functioning of computers as black boxes. When users cannot see or cannot understand actual functioning, they are liable to project their own imagination.

Although deliberately simulating rather than replicating human intelligence, ELIZA could deceive its human interlocutors since it was playing a role: it was personified at the narrative and design level, it had a name, it used language, it expressed itself in a seemingly coherent way. As such, ELIZA was an artefact created to prove that AI should be understood as an effect of the users'

tendency to project identity; it was a 'narrative about conversational programs, as much as it was a conversational program itself' (p.56). And it was also the materialization of that knowledge in the form of software design. In this regard, Natale notes how 'AI depends on the production of physical as well as discursive artifacts' (p.66). This complex stratification of technologies, knowledge and practices is the ground on which voice assistants establish themselves as representations, narratives and interfaces of AI.

As we can see from this short introduction, the perspective of this book is close to science and technology studies as it addresses the sensemaking of AI as a social phenomenon constructed by means of scientists, engineers, users, narratives, knowledge and materialities. In this co-constitution of technical and social elements, an important role is played by metaphor, narrative and fantasy and their retro-actions on the materiality of technology. On the other hand, the book's perspective is also anthropological since it assumes a disposition of humans to accept deception as something structural for their mediated condition. Nevertheless, it is not completely clear whether deception should be considered the cause or the effect of media assemblage. Is it a natural disposition of humans that is discovered and exploited to design effective artefacts, or is it the product of media technologies and knowledge about humans emerging during their development?

In these pages, I think I can read the latent presence of a posthuman thought. The human that machines intend to emulate, in fact, does not exist in the first place, but is itself the product of a new set of knowledge and practices enacted within the social and epistemic context of late modernity. The human is defined socio-technically by the very knowledge developed to produce intelligent machines. As the author suggests in the section on the Loebner Prize, not only machines but also humans have to become humans in social terms by acting in specific ways, complying with rules and social expectations which are constructed in the first place. This co-constitution between humans and machines has been conceptualized by such posthuman theorists as Katherine Hayles (1999) and Roberto Marchesini (2002). Moreover, the consideration according to which there is no AI without human–machine communication can itself be read in posthumanist terms. The question, I think, is not that AI needs to be recognized by humans in order to be such, but that intelligence itself is not a thing, nor a commodity which belongs to some being, human or machine, or that can be emulated. Instead, intelligence is a social effect produced between human and machine, knowledge and power, materiality and imaginary.

Allow me a final consideration about the role of the interface, to which Natale dedicates several pages. Banal deception operates by concealing the underlying functions of digital machines through a representation constructed at the level of the interface. At the same time, design thinking deployed around such concepts as user-friendliness and frictionless interaction pursues the disappearance of the interface itself, according to the principle that 'the best interface is no interface' (Golden, 2015). Voice as an interface goes in this direction and is considered a 'natural' interface (Norman, 2010). Thanks to the voice, in fact, the interface between human and machine disappears, not only in the sense that it passes from the visual to the acoustic domain, but also in the sense that it tends to be naturalized by the user: it makes use of already established (naively defined 'natural') methods of interaction which recall a communicative habitus, such as the dialogue and the conversation. But this naturalization risks concealing the artificial, and therefore also arbitrary, condition of the interface. As an architecture of choice (Zuboff, 2019), the interface is a filter of what can be done and what cannot be done with a device, a filter that is never neutral as it is the product of the interaction among functionality, commercial interests, epistemologies, expectations of designers, cultural prejudices, political projects, etc.

Natale does not fail to underline this political element of banal deception. At the same time, I think the question should also be framed in the context of the growing presence of nonhuman agencies in machine-to-machine communication interfaces. For Benjamin Bratton, for example, the interface is a key point in the Stack, which is the computational megastructure that today dominates geopolitical reality and determines the production of knowledge and government tools. In his opinion, the interface is 'any point of contact between two complex systems that governs the conditions

of exchange between those systems' (Bratton, 2015, p.220). The human user is not at the centre of this complex system, and most of the interfaces connect nonhuman users, such as machines to other machines through codes, protocols, sensors, switches or chemical surfaces. If one of the two systems is 'a phenomenologically intuitive subject, such as a human (Bratton, 2015, p.219), the interface becomes semantic, assuming the features of icons, symbols, voices, indexes and diagrams. In this case, Bratton recognizes that the role of the interface is not only to show affordances (i.e., possible action schemes), but also to 'narrativize' the meaning of these possible actions so that they seem not only valid but also sensible. In being belief systems (Bratton, 2015, p.221) which have a pedagogic and therapeutic function, interfaces are agents of banal deception. But behind this deceptive surface of the interface, something is happening (Galloway, 2012): machine operations are nonhuman agencies that challenge human comprehension since they do not share the same kind of sensemaking.

We should not ignore that one of the turning points in the evolution of AI systems, such as speech recognition, is found in the emancipation of machine operations from the human model. As Roberto Pieraccini says, Frederick Jelinek, IBM's continuous speech research (CSR) group director, found a solution to the lack of accuracy in speech recognition when he sensed that, rather than exhaustively studying how people hear and understand speech, researchers need to focus on how machines could do it their own way. As reported by Pieraccini (2012, p.45), Jelinek's consideration, obvious yet brilliant, was that 'airplanes do not flap their wings to fly'. Similarly, in voice technology, rather than trying to imitate the human, the IBM researchers should have started investing in the specifics of the machine. Similar research paths have been adopted in speech synthesis (Napolitano, 2020, 2022) when the focus on the human act of speaking of the so-called 'articulatory synthesis' gave way to synthesis techniques based on recorded sounds. Here it is becoming common to let algorithms process the speech signal on their own terms; for example, with segmentations of speech which do not follow articulation or language rules but are based on parameters which are not detectable by human sensitivity.

These research paths have led to the development of machine learning as a technique of AI which is less and less related to the study of human perception, and more and more based on the optimization of machine-to-machine operations. Those operations are often inherently opaque and not addressed to human comprehension; they do not share human cognitive modalities, relying instead on statistical pattern recognition. This type of non-human agency as a property of AI works toward an epistemological posthumanism. It affirms and performs the non-centrality of human perspective in the production of knowledge.

In the light of these considerations, we can see in banal deception the same ambivalence we see in the interface: while it is a form of representation that narrativizes the material complexity of AI, it also affects the way technology acts upon individuals and produces (hybrid) subjectivities. Banal deception is at the same time a social phenomenon, scientific knowledge, a technical instrument, a marketing strategy, a political issue. And Natale's capacity to accompany the reader along these paths makes this book fundamental reading for an understanding of AI as a socio-material phenomenon. Unveiling the mechanisms of banal deception, as this book does, is not only an exercise in critical thinking, but also a way to confer agency on users, denaturalizing technology and resisting the normalization of deceptive mechanisms. It is a very good example of the contribution social sciences and media history can make to an understanding of the world we live in and to shaping the future of our societies.

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