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Ways of Thinking

Towards a Pluralistic and Inclusive Understanding of Thinking *Habitus*

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Abstract. The paper outlines a pluralistic and inclusive understanding of thinking as an aesthetic habit. Taking as a starting point Noë’s recent idea that thinking is a graphical practice (§ 0), I propose a general and interdisciplinary interpretation of thinking as a *habitus*, which offers an articulation of how verbal and visual thinking unfolds and places emphasis on the entanglement between words and images inside the mind and on technologies of the word and the image outside the mind (§ 1). Then, I claim that such an interpretation can help to address two pressing phenomena of our time: the resurgence of technologies of the image, which questions the “mediatic discrimination” linked to the shared mediatic primacy of the alphabet and printing (§ 2); the vindication of subjectivities who were traditionally marginalized from knowledge practices and representations, which raises the issue of “epistemic injustice” and its undesirable consequences (§ 3).

Keywords. Enactivism; media philosophy; writing; image; epistemic injustice.

1. *Second-order practice: thinking and graphemes*

In the most recent phase of his work, the philosopher Alva Noë articulates the thesis that

thinking should be considered a second-order (i.e., disclosing, manifesting or displaying) practice which has the function of reorganizing our first-order (i.e., biological, routine, or organizational) activities: in its true essence, such a performance consists in «using graphical means to think about the world and our problems» (Noë [2015]: 50). More precisely, the two main graphical technologies or «graphemes» (Noë [2023]: 59) for engaging the world cognitively would be drawing and verbal writing (i.e., pictures and words), so that art and philosophy emerge as two of the basic «strange tools» through which we human beings think, that is, reflexively reorganize our lives: art and philosophy represent our two fundamental methods of research, «aiming at illuminating the ways we find ourselves organized and so, also, the ways we might reorganize ourselves»; namely, they «expose the concealed ways we are organized by the things we do» by taking up «the painterly and the writerly attitude» that characterize us (Noë [2015]: 26-27, 55).

I take Noë's position – just outlined above – as a general starting point and hold that thinking, conceived as a *graphical practice*, conveys at least three fundamental elements:

i) Thinking always involves a particular aesthetic habit, in the general sense that it concerns perceptions, movements, sensations, gestures, actions, expectations, and so on: it is not a mere disembodied spiritual activity, but it has its particular concrete and living anthropological conditions of production and unfolding, first of all with respect to its graphic dimension.

ii) Thus, such a process presupposes a link – or better, to use a key term of Noë's, an entanglement – between internal and external aesthetic habits, that is, between the pictorial and verbal “dress” of our infra-mental thoughts and representations and the pictorial and verbal “attire” of our extra-mental media and expressions: internal and external “markings” go together.

iii) The fact that art and philosophy are subspecies of a larger common genus (i.e., achieving self-transformation and understanding: reorganizing ourselves) means that they – and thus percept and concept, incarnation and abstraction, image and word – are not simply contraposed, or even put in hierarchy, assigning dominance to the second pole; rather, they express «distinct styles of involvement with the world» (Noë [2023]: 68-70).

Briefly, all this now means that thinking can be seen as an aesthetic habit through which internal pictorial and verbal representations and external pictorial and verbal media march together, and visual and verbal knowledge and reflection cooperate on the common task of reorganizing our activities and lives. In what follows, I go through these ideas, first proposing a general interpretation of thinking as a *habitus*, viz., as an aesthetic habit, which takes its cues and ideas

from classical philosophy, the philosophy of mind, psychology, cognitive science, media studies, mediology, image studies, and game studies (§ 2). Then, I show the possible relevance of this notion of thinking, claiming that it can help us to overcome, or at least to problematize openly, two interrelated kinds of bias or prejudice that we seem to have inherited from our tradition: a “mediatic discrimination”, connected to the historically shared mediatic primacy of alphabet and printing, which tends to devalue all forms of non-textual knowledge and thinking (§ 3); the potential “epistemic injustice” which considers some ways of thinking – i.e., the visual ones – “second-class” or even less human, especially with respect to verbal-written thinking (§ 4).

2. *From outdoors to indoors and return: a radiography of our thinking habitus*

Plato was the first (cf. *Philebus*, 38e-39c) to stress that our soul or mind is like a coworking space, hosting two types of “graphic designers”: a writer who plots words and a painter who plots images. Since that time, we have described our inner representations, that is, our thoughts, as if they were walking the psyche’s catwalk wearing two basic types of clothes: some that are linguistic and others that are pictorial. This provides a basic schema of our thinking *habitus* – both in the sense of *habitudo* and *vestis*, of habit and dress (Tab. 1):

<i>Habitus</i>
Word
Image

Tab. 1. The core of our thinking *habitus*.

This basic distinction remains valid even today in our common sense as well as in our various intellectual discussions, including the most philosophically sophisticated ones, where we find the assumption that cognition unfolds as a process of writing and reading and/or painting and observing. An iconic example is the already classic “great debate” between those who say that mental representations are like words or sentences in the head and those who instead say that they are like pictures or figures in the head (see e.g., Block [1981]; Tye [2000]) – with someone taking more sharply a less dichotomous «dual coding» approach, according to which verbal and image representations are necessarily always connected (Paivio [1971], [1986]). Moreover, this characterization includes some-

thing else worth noting: the technological or mediological model of the *graphein* – already used by Plato – tells us that if we have words and images in our heads, it is because we already employ *technologies* of the word and of the image *outside* our heads, that is, because we write and draw, in the broadest sense. Hence, the schema in Tab. 1 can be further articulated (Tab. 2):

Internal <i>habitus</i>	External <i>habitus</i>
Word	Writing
Image	Drawing

Tab. 2. The double-sidedness of our thinking *habitus*.

When I have a thought about – let’s say – a blind reviewer (hoping it won’t be a nightmare), a word and an image appear as a “note” in my mind; but, I can also annotate them outside my mind, i.e., by hand-writing the words “blind reviewer” and by hand-drawing its figure on a sheet of paper – just to indicate the two most rudimentary instances. Further, those external annotations are not just extrinsic to my thoughts, because once these have turned into things – becoming visible, tangible, and in a broad sense manipulable – I can *return* to them: it is a virtuous circle made of continuous feedback relations, so that inner dress and outer habits are deeply intertwined. The “natural” words and images contained in the mind correspond with the “artificial” words and images given outside the mind: the mind acts like a scribe and a painter because one writes and paints outside of it. There are no inner marks without outer marks: thinking is intrinsically graphical, hence deeply aesthetic.

In order to fully understand this circle and its relevant implications, we can gather together at least four groups of disciplines or debates in an original and trans-disciplinary way: a) psychology and philosophy of mind, including some further articulation of the “great debate” just mentioned; b) the related development of cognitive science based on the “4E” approach, mainly of those insisting on the “E” of enactivism; c) mediology and media studies; d) image studies and game studies. Clearly, I cannot discuss all these approaches in detail here; my specific goal is simply to extract the concepts and ideas that can contribute my argument in the following way:

a) Words and images are both plural labels that can and should be further articulated: our mental words can take the shape of a live broadcast or an inner dialogue, or as a group of notes or a set of sentences; our mental images can take

the shape of a vivid and figurative painting or photography, as well as a more abstract and explorative diagram or map. Briefly, our mind can have noisy spoken words as silent written words, and full-bodied pictorial images as spectral spatial images: our inner discourse can be made of voices as well as propositions; our inner visualization can be made of objects as well as patterns (cf. e.g., respectively, Fernyhough [2016]; Roessler [2016]; Vendler [1977]; and Knauff [2013]; Kosslyn [1994]; Kosslyn, Thompson, Ganis [2006]). Even more precisely, we manage three kinds of internal representations, that run parallel and are each unique in themselves, but all capable of partial translation one into the other: not only the symbolic (i.e. language-like – be they vocal or textual), and the imaginal (i.e. image-like – be they pictorial or spatial), but also the motor, that is, action-like representations (Bruner, Oliver, Greenfield, *et. al.* [1967]: 11).

b) If cognition arises through a dynamic interaction between an acting organism and its environment, or – as Noë himself puts it – we have an experience «by making use of the resources available to us in the situations that we find ourselves in» and «among those resources are the tools and technologies» (Noë [2023]: 58), then the medial environment and tools are also included. Our scaffolded thinking is such that «pictures and spoken words, then written words and diagrams, and most recently the full firepower of interchangeable digital media rank high among the tools by which we press maximum problem-solving power from brains like ours» (Clark [2003]: 75). This means that we take cognitive advantage not just of the linguistic environment – as it is more easily recognized, often making linguistic media the ultimate artifacts – but even of the pictorial one, thus of a general “verbal & visual” ecomedia scaffolding us and whose affordances are always intertwined with effective and/or possible actions (cf. e.g., Fingerhut [2014]; [2020]; [2021]; Fingerhut, Heimann [2017]; Kondor [2008]; Parisi [2018]).

c) Human beings are shaped more by the nature of the media through which they communicate than by the content of the communication: media are not inert supports, simple message carriers, but are themselves the message – at least to a certain extent (cf. the classical McLuhan [1964]: 7-23). In fact, they restructure and transform what they supposedly just transmit and transport, thanks to a virtuous feedback and counter-feedback loop – and what goes for “bodily” prosthetics goes also for “mental” ones, as our history certainly reveals (see e.g., De Vos, De Kerckhove [2013]; De Kerckhove [1993]; Goody [1977]; [1986]; Havelock [1986]; Olson [1994]; [2017]; Ong [1982]). In addition, media do in fact have a history, so that the different technologies of the word and of the image enter into a troubled relationship through which their power relations and their status in the “knowledge market” vary over time (cf. e.g., Antinucci [2011]; Kittler [1986]; Manovich [2006]).

d) Video-game images¹ are a particular kind of image, insofar as their computational-simulative attitude pushes to its extreme limits the fictional, participa-

tive, and emulative dimension that – at least to some degree – was already proper to the theatre-image, tv-image, and cinema-image, presenting itself as paradoxically an-iconic (Pinotti [2020]) – but not simply unrealistic. In fact, gaming-images simultaneously express possible worlds and support interactions (see e.g., Arielli [2023]; Crevoisier [2019]; Klevjer [2019]; Meskin, Robson [2010]), that is, they transmit and communicate sets of effective and/or possible actions and experiences which are strangely both real and virtual (cf. e.g., Silcox [2021]; Nguyen [2020]), or – more precisely – *really virtual*, if we take such images as the objectification or externalization of our body schemes, i.e., of our heuristic and explorative mental model, now becoming materially and mechanically reproducible (Parisi [2021]). Hence, gaming-images are true sensorimotor images (see Eugeni, Catricalà [2020]).

So, putting together all these elements, our schema can be further developed and enriched (Tab. 3):

Indoor <i>habitus</i>		Outdoor <i>habitus</i>	
Verbal (Words)	Vocal	Technologies of the word (Writing)	Phonograph, dictaphone, radio, ...
	Textual		Writing, print, typewriter, ...
Visual (Images)	Pictorial	Technologies of the image (Drawing)	Sculpture, painting, photography, ...
	Spatial		Map, model, chart, ...
	Sensorimotor		Theater, television, movie, video-game, ...

Tab. 3. A more refined spectrum of our double-sided thinking *habitus*.

No doubt, this table is far from being the ultimate representation of our thinking *habitus*, if for no other reason than – for instance – it does not consider the various possible thresholds and overlappings between different kind of images; nevertheless, a similar overview is enough to show us two primary things, strictly interrelated.

The first is that there is a deep correspondence between internal and external *habitus*, in the form of a constitutive relation, such that our ability to think

verbally and visually inside our mind (in all their sub-declinations) is at the same time supported, prolonged, encouraged, developed, enforced, restructured, shaped, organized, and so on (briefly: *made really possible*) by its interaction with the set of verbal and visual tools available outside our mind: thus, the general «recursive effect» that «the things that we make and our skills of making seem to have on human becoming», according to which we are made by the things we make (Ihde, Malafouris [2019]: 198), also applies – if not firstly – to our cognition and thinking, as we still tend not to highlight sufficiently. Our mind has as such «an artifactual character»: the very fabric of our thinking not only is exosomatically embodied, but it also unfolds through and is shaped by external objects and technical artifacts, which activate new modes of thinking (Aydin [2015]). Things in fact do shape the mind; thinking as such involves a material engagement – presenting itself as *thinging* (Malafouris [2013]): if we deal with verbal and visual representations, it is because we are materially engaging with verbal and visual things – and vice versa.

The second is that the possibility of placing a different emphasis on this or that internal *habitus* each time, stating for instance that our higher cognitive processes and more sophisticated thoughts consist in managing verbal concepts (more often) or visual concepts (more rarely, to say the very least), also depends on the history of such tools: in the “knowledge market” one sees the predominance or even the monopoly of verbal technologies and media (as it was in the past) or of visual technologies and media (as it is happening today), and this makes a difference both in the self-representation of our mind, i.e., in how we think of our own thinking, and – maybe even more importantly – in the way we actually think. In other words, surely simplifying, the more we make use of technologies of the written word, the more we tend to think textually and to conceive thinking in textual terms.

Such a framework is deeply reflective of the new “mediatic turn” in which thought is finally recognized as mediatically contingent (cf. e.g., Margreiter [1999]; Mersch [2017]), such that the metaphysical equation of thinking and being is gradually replaced by the realization that if the thinking of being develops in time (naturally as well as historically), then this also implies that it always requires an external medium: not only the natural one of language, but also the artificial ones represented by all cultural media of experience (de Mul [2008]: 155-157). More precisely, thinking always requires its own outsourcing and supplementation through the technologies of the word and the technologies of the image, which exteriorize, objectify, and convey our verbal and visual products, fixing them into an external support so that they become recognizable and sharable. Word and image media at the same time reveal and enhance our ways of thinking, namely, they *realize* them by concretely displaying their structure, functioning, performance, and so on: the fact that we can talk about – let’s say – making mental films or the like

goes hand in hand with the production of extra-mental movies or whatever, in the specific sense that through cognitive prostheses we actually learn how to make inner films better, i.e., with more consciousness, more mastery, more richness, more freedom, more confidence, and more creativity.

In this sense, our thinking *habitus* is as such structurally aesthetic, a genuine aesthetic practice: it takes shape materially and sensorially, producing – according to Bourdieu’s famous definition of *habitus* (Bourdieu [1980]: 53) – a set of peculiar structuring structures, i.e. an embodied disposition that generate and organize practices and representations. All this may seem somewhat trivial, but my claim is that we are nonetheless still far from having completely accepted it and fully developed its implications, first of all because we tend to fear that explicitly thematizing the plural conditions of the real possibility of thinking would mean undermining its validity rather than enlarging its understanding and substantiating its functioning, as is instead the case. So, in the following paragraphs my goal is to explain better why it is so important to endorse such a stance on the mind, namely, why we need to rethink our thinking *habitus* openly – and even radically. I will focus on two primary issues, which are directly connected: the “mediatic discrimination”, which tends to devalue all forms of non-textual knowledge and thinking (§ 3); and the subsequent forms of “epistemic injustice” directed towards traditionally marginalized subjectivities (§ 4).

3. *What if we had a video-bible? Text bias and visual thinking*

One of the main claims of various pictorial and iconic turns (cf. at least Curtis [2010]) is that we are now becoming more and more aware of the influence of a contraposition pervading «almost the entirety of intellectual and cultural history», according to which «images and language are generally considered disjoint orders that differ in their semiotic registers» (Krämer, Ljungberg [2016]: 1). This contrastive difference would express «an old philosophical prejudice», which could be summarized through a series of oppositions that testify to what is clearly «the arrogance of the linguistic imperialism» (*sic!*): «images are to words what perception is to understanding, material to intellectual, passive to active, vague to precise, emotional to rational, and so on» (Roque [2009]: 4). Similarly, there are those who even say that we live under the «tyranny» of the restrictive mindset of «scriptism», which takes writing as «a general model for all processes of communication and understanding» (Harris [2009]: 11-12), or – with just a little less vigor – that our Western culture shows «a distinct preference for monomodality» (Kress, van Leeuwen [2001]: 1) and is built around a «single, exclusive, and intensive focus on written language» which has dampened «the full development of all kinds of human potential, through all the sensorial pos-

sibilities of human bodies, in all kinds of respects, cognitively and affectively, in two-and three-dimensional representation» (Kress [2000]: 157) – starting exactly with visual representation.

Definitely, speaking in these “guerrilla” terms goes a little bit too far, but at the same time it forces us to engage explicitly with the idea that the Western cultural and philosophical tradition could be characterized by a widespread «text bias», which would accustom us to take it for granted that «to know is to think thoughts expressible in words», namely, to think of knowledge «in terms of propositions or sentences» (Baird [2004]: 1-8, 122). Coming back to the terms used in § 2, it is as if, between the two “graphic designers” hosted in the coworking space of the mind, only the word-plotter is really welcome, while the image-plotter is an intruder; or – if you prefer – the first is the boss and the second the employee, if not a mere intern. One of the main consequences of such a pre-understanding would be that «a long history of suspicion attends to the role of the visual in western thought», so that we can still experience today «the longstanding distrust of visual methods as primary modes of epistemological work» (Drucker [2020]: 10-11).

Just think about how children in their early years of schooling are constantly encouraged to produce images which, however, are not corrected in the same way that words are: «unlike writing, illustrations are not “corrected” nor subjected to detailed criticism (“this needs more work”, “not clear”, “spelling!”, “poor expression”, and so on)», because they are seen as a mere medium of self-expression, rather than of communication and knowledge – that is, drawing is seen «as something which the children can do already, spontaneously, rather than as something they have to be taught» (Kress, van Leeuwen [2006]: 16). This would show concretely how drawing is viewed not as a rule-governed system acquired through a developmental period and whose structure can be grammatical or ungrammatical (viz., as a language akin to verbal-written one, the *Language*TM), but as a simple skill «conditioned only by the expressive aims and abilities» of the drawer (Cohn [2013]: 3) – thus offering a glimpse of the «unwholesome split which cripples the training of reasoning power», that would be the result of the «prejudicial discrimination between perception and thinking» affecting «our entire educational system» (Arnheim [1969]: 2-3). The tenets of such effective “mediatic discrimination” would be so engrained in our comprehension of how cognition works that even young video-essayists today – twist of fate – can display them:

writing is propositional in nature: it always carries the potential of meaning. Whenever we read words, they exist in the context of being true or false. [...] But you don't judge whether a picture is true or false the same way you judge a sentence. [...] There's no argument there. [...] Images just don't call on you to judge them as true or false; they are there to evoke feelings. You can like or dislike an image, you can feel happy or sad or hungry because of it, but you can't prove this image is wrong. (oliSUNvia [2023])

I do not want to discuss here whether images are actually incapable of ever presenting an effective conceptual content because – for instance – they cannot support the basic logical operation of quantification and negation in the way that enunciations can (cf. e.g., Fleming [1996]; Fodor [2007]). Where someone sees an arbitrary usurpation and segregation, if not a ruthless and deliberate “culture war”, we are more likely to have a simple distribution of roles, based on a real difference in terms of expressive, communicative and cognitive specializations. The problem, however, is precisely to shed light on the possible reasons for such a concrete diversity, without exacerbating the contrast between word and image and without explaining the different treatment they receive in essentialist terms. I therefore want to stress that if we had really been prone to consider concepts as «the meanings of words» and propositions as «the centerpiece, if not all, of the world of what we know», such that images never gained true credibility as possible bearers of genuine knowledge and thinking, it is because «knowledge and learning are almost always viewed in forms associated with current literacies; they appear to us through the lens of a literacy» (DiSessa [2001]: 65).

In other words, the rootedness of “text bias” in our epistemic practices as in our self-understanding of how our mind works is not the result of a conspiracy of secret imperialist powers (a kind of “Word Spectre”) with no real material motivation, but it depends (also) on the fact what we have been living through the consequences brought about by the gradual combination of two main technologies of the word: alphabetical writing and movable type printing, which made (a muted and soundless) word – thus not the image – mechanically reproducible, hence widely available to potentially anyone (see e.g., Eisenstein [1983]; McLuhan [1962]). Not by chance, the metaphor of the world as a great and unique written book to be read has become the key representation of knowledge processes (cf. the classical Blumenberg [1986]).

But things are slowly changing, at least since the “democratization of image” typical of the second half of 20th century, by which capturing photographs started to effectively mean «note-taking on, potentially, everything in the world, from every possible angle» increasingly for everyone, so that «the sense that we can hold the whole world in our heads – as an anthology of images» becomes more and more familiar, and if in the past «everything in the world exists in order to end in a book», with the rise of analog or film photography «everything exists to end in a photograph» (Sontag [1973]: 138, 1, 19). Only then can the «world-as-a-picture» model challenge the «world-as-a-text» model and thus contest the hegemony of the word as «the highest form of intellectual practice» along with the consequent treatment of visual representations as «second-rate illustrations of ideas» (Mirzoeff [1998]: 5): if this could have been stressed a couple of decades ago, what would we now say after the “upgrade” offered by the smartphone and its panoply of digital images, or the rise of the realm of infographics and dataviz?

More generally, we are all experiencing how visual communication and expression have started to become less and less the domain of specialists, and more and more crucial in the public domain as personal communication and expression. This is true not only as verbal writing becomes ever more hybridised with the most disparate types of images (websites, slides, TikTok videos, chats, etc.) and its visual-spatial dimension (line, word, and letter spacing, dimensioning, and colouring, etc.) gains attention in the attempt to build a «content-responsive typography» (Tufte [2020]: 49-64), but also when the graphic dimension of the alphabet itself is being exploited, as happens when the word (if it is still such) “v10l3nc3” is used in an Instagram post by a victim of sexual assault to avoid its categorization by “the algorithm” as an incitement to rape, shadow-banning, or even profile termination. The list of cases could be really long, but what counts here is the more profound anthropological condition we are currently facing: we are becoming more and more accustomed to thinking visually – be it as filmmakers, video-makers, game designers, graphic designers, data artists, and likewise.

How much longer then will we tolerate a secondary role for visual thinking in all its possible ramifications, blindly accepting assumptions like «the images do not argue or justify anything» (Han [2021]: 38)? After all, we have long been accustomed to «create and use a panoply of non-sentential representations throughout our ordinary lives» in order to think (Camp [2007]: 145), be they maps, charts, diagrams, pictures, drawings, sketches, and so on. But as such practices become the norm, or at least progressively common and obvious, the time seems ripe to re-interrogate how knowledge is produced, managed, shared, and conceived, outside our mind as well as inside it – to the point that we can imagine resetting and rebooting our entire “book civilization” as a “video civilization”:

What will soon end in the monopoly of bits and fiber optics began with the monopoly of writing. [...] Writing, however, stored writing – no more and no less. The holy books attest to this. *Exodus*, chapter 20, contains a copy of what Yahweh’s own finger originally had written on two stone tablets: the law. But of the thunder and lightning, of the thick cloud and the mighty trumpet which, according to scripture, surrounded this first act of writing on Mount Sinai, that same Bible could store nothing but mere words. (Kittler [1986]: 4,7)

Writing, in the sense of placing letters and other marks one after another, appears to have little or no future. Information is now more effectively transmitted by codes other than those of written signs. What was once written can now be conveyed more effectively on tapes, records, films, videotapes, videodisks, or computer disks, and a great deal that could be not written until now can be noted down in these new codes. Information coded by these means is easier to produce, to transmit, to receive, and to store than written texts. Future correspondence, science, politics, poetry, and philosophy will be pursued more effectively through the use of these codes than through the alphabet. [...] Many people deny this, mainly out of laziness. They have already learned to write, and they are too old to learn the new codes. We surround this, our laziness, with an aura of grandeur and nobility. If we were to lose writing, we say, we would lose everything we owe to such people as

Homer, Aristotle, and Goethe, to say nothing of the Holy Bible. Only how do we really know that these great writers, including the Author of the Bible, would not have preferred to speak into a microphone or to film? (Flusser [1987]: 3)

To be clear, I am not suggesting that we are moving towards the end of writing in the sense that we won't be writing alphabetically anymore; rather, I am stressing that rediscussing and renegotiating how we define our thinking *habitus*, questioning the consolidated primacy of verbal-written thinking, is an unavoidable task at a time when visual thinking and the technologies of the image are gaining more and more anthropological relevance. Moreover, this also allows us to address the epistemic injustice fuelled by this inherited conception: let's delve into this now.

4. *Neurotypicality, autism, and deafness: can we avoid epistemic injustice?*

The issue I want to raise here is as simple as it is disorienting. The assumption that our thinking *habitus* is mainly or even exclusively verbal and more strictly textual, especially when it comes to the higher cognitive functions, may cause (unwanted, it goes without saying) forms of discrimination, that is, it may lead to a peculiar kind of *epistemic injustice*: a situation which disadvantages some people in their capacity as knowers.

Since its first appearances (see mainly Fricker [2007]), the concept of epistemic injustice has given rise to wide debates and applications, resulting in an increasingly refined articulation of the range of its possible meanings; however, for our purposes, I refer to the following general definition:

those forms of unfair treatment that relate to issues of knowledge, understanding, and participation in communicative practices. These issues include a wide range of topics concerning wrongful treatment and unjust structures in meaning-making and knowledge producing practices, such as the following: exclusion and silencing; invisibility and inaudibility (or distorted presence or representation); having one's meanings or contributions systematically distorted, misheard, or misrepresented; having diminished status or standing in communicative practices; unfair differentials in authority and/or epistemic agency; being unfairly distrusted; receiving no or minimal uptake; being coopted or instrumentalized; being marginalized as a result of dysfunctional dynamics; etc. (Kidd, Medina, Pohlhaus [2017]: 1)

So, to get straight to the point, if we privilege propositional representations in our mental "intellectual VIP parties" or "cognitive private clubs" and – correlatively – technologies of the written word in our material interactions and engagements, then we are also privileging certain kinds of persons in meaning-making and knowledge production practices, which excludes and marginalizes others, with all the implications attendant to similar conditions on the social-cultural level. I

am not just thinking of the current «generations of visual learners» comprised of people who even «struggle to finish the books they buy» (Carreras [2013]: 5), but more incisively – for instance – of those on the autism spectrum who think in a predominantly or almost exclusively visual way (on autism and epistemic injustice see more widely e.g., Catala, Faucher, Poirier [2021]). In fact, from their perspective, their own way of thinking has suffered a true misrepresentation, if not a complete silencing, due precisely to the dominance of text bias:

when it comes to communication, language is the water we drink, the air we breathe. We assume that the dominance of language forms not only the foundation of how we communicate, but also the foundation of how we think – and in fact for centuries, we have been taught to believe just that. [...] The first step toward understanding that people think in different ways is understanding that different ways of thinking *exist*. [...] I am a visual thinker. [...] The world didn't come to me through syntax and grammar. It came through images. [...] The world comes to me in a series of associated visual images, like scrolling through Google Images or watching the short videos on Instagram or TikTok. (Grandin [2022]: 1-2)

My mind works similar to an Internet search engine, set to locate photos. All my thoughts are in photo-realistic pictures, which flash up on the “computer monitor” in my imagination. [...]. When I design livestock facilities, I can test run the equipment in my imagination similar to a virtual reality computer program. [...] My concept is sensory based, not word based. [...] When I read, I convert text to images as if watching a movie. The images are then stored in my memory. [...] In my case, abstract thought based on language has been replaced with high-speed handling of hundreds of “graphics” files. (Grandin [2009]: 1437-1438, 1441)

Hence, the question becomes: are we willing to accept that these types of subjectivities and their thinking *habitus* deserve – if it goes well – a second-class seat in our understanding of the mind, and thus in our epistemic practices? Are we condemned to judge diverse communicative and thinking repertoires as “deficient” rather than as resourceful, thus also favouring the narrowing, distortion or flattening of our epistemic representations (Molinari [2022])? Significantly, things are already changing, mostly in education (just think of the attention given to the different learning styles), thus prompting – to cite a basic example – an examination of the conditions of accessibility for traditional writing, along with the redesigning of type and font size in printed text for readers with learning disabilities related to dyslexia; but we also find some attempts to reflect on the standardization of fonts and typefaces for commercial or institutional purposes². Regardless, this is nothing more than the tip of the iceberg with respect to what is needed in order to truly question the longstanding tenets of our theoretical and practical comprehension of cognition – at least if we really want to take seriously those who claim to be epistemically banned, or nearly so.

For instance, it is surely important that contemporary behavioural sciences are abandoning the idea that «language and thought go hand in hand», according to

which grasping a thought is understanding a sentence and practical reasoning is to be understood in terms of transitions between sentences: acknowledging that there could be and there is thinking *without* words truly makes our understanding of thought and rationality more inclusive, allowing us to study how non-human animals and infants think, albeit in a nonlinguistic or prelinguistic way (Bermúdez [2003]: poss. 113, 392). Nevertheless, this does not preclude maintaining that the higher cognitive abilities, such as thinking logically, monitoring one's own processes of belief formation and argument, reflecting on the desires one wants to have, attributing thought to other creatures and the like, are strictly dependent on words and enacted propositionally: while «the gulf between linguistic and nonlinguistic thought should not be exaggerated», and the cognitive separation between creatures that have language and creatures who don't is a division «between two types of thinking», rather than «between thought and the absence of thought», it remains that «the separation is very real» and that «the type of second-order cognitive dynamics that involves explicitly reflecting on the inferential connections between thoughts and the likelihood of their truth» requires explicitly «taking thoughts as the objects of thoughts», viz., verbal-written language (Bermúdez [2003]: poss. 3306, 3340).

To put it otherwise, we should aim not just at an inclusive or less exclusive division between nonlinguistic and linguistic thought that coincides with a division between non-human (or not-yet-fully-human) thought and human thought, but at a further and more radically inclusive division within the realm of *fully human ways of thinking*. To be fair, I am not simply assuming that linguistic and pictorial experiences are the same, primarily with respect to their neurological bases (cf. Calzavarini, Voltolini [2023]), nor that the knowledge that we tend to consider of the higher level (e.g., philosophy, logic, or whatever) can actually be processed visually: all this is absolutely debatable. Besides, it may be noted that Grandin herself has been writing books for decades (with the valuable support of her editors), which shows not only that written words are best suited to express abstract ideas and general concepts, but also that the visual analogies of the mind she uses are nothing more than figures of speech³. This could even be the case, but we should then ask ourselves whether such a condition is actually an immutable fact and not a contingent situation: longstanding does not mean eternal – at least if we are willing to accept Kittler's and Flusser's idea of the “video-Bible” and, more generally, the premises and consequences of the “mediatic turn”. What if – in other words – Grandin is still only a child of her own time, i.e., of the alphabetic-typographic and pre-digital age? This, too, is absolutely debatable. But that is exactly my point: such subjects are worthy of discussion, and this at the very least presupposes that we no longer take it for granted that higher thinking can in no way be associated with visual thinking, also because this could lead to the dangerous conclusion that some persons are essentially “lower thinkers” – if not dangerously “less human”, or worse, inhuman.

Let me be even more frank: maybe we will conclude that persons on the autism spectrum who think in a predominantly or almost exclusively visual way actually cannot philosophize in the strict meaning of the term, or – as a less extreme alternative – that we are problematically called to redefine our same pre-understanding of philosophy as “neurotypical”, considering that philosophy represents the alphabetic-typographic knowledge par excellence. But – I do believe – this is not a good reason to refuse an open discussion of the topic; in fact, quite the opposite. In a similar framework, it would be no coincidence, for example, that Wittgenstein – with his conceptual tribulation with language and expression – could be introduced as a key figure in “post-literacy philosophy”, i.e., the attempt «to come to conceptual terms with the fact that the dominance of the printed book as the medium of communication has become challenged by the rise of the new, electric and electronic media» (Nyíri [2002]: 185). Indeed, if the Austrian philosopher was challenging «the literary bias of Western philosophy at a time when in everyday experience the sources of that bias were drying up» (Nyíri [2002]: 185), it was because he was trying to cope with his dyslexic condition, engaging in its philosophical articulation and generalization (Nyíri [2006]: 353). In this perspective, the famous proposition «whereof one cannot speak, thereof one must be silent» should go hand in hand with a sentence such as “whereof one cannot write, thereof one can visualize”.

Once again, I am not simply assuming that all this is irrefutably true, for Wittgenstein as well as for any other philosopher; but – to put it mildly – we are witnessing the rise of new issues and questions. In the same vein, I do not suggest that the overview of thinking *habitus* summed up in Tab. 3 is definitive and complete, not even in the sense of being totally inclusive: in fact, one could say that we should add to verbal and visual thinking also *corporeal thinking*, considering that we humans express concepts not only generating sounds and creating graphic representations, but also moving bodies, so that we have verbal, visual, and sign languages (cf. Cohn [2013]: 3-7). This would mean that Tab. 3 could be even better articulated as follows – limiting it to its first level (Tab. 4):

<i>Way of thinking</i>	<i>Fundamental medium</i>
Verbal	Word
Visual	Image
Corporeal	Body

Tab. 4. A possibly more enriched articulation of the spectrum of our thinking *habitus*.

As it is now clear, recognizing this would be important not only from a perspective such as «somaesthetics», which focuses on the several ways we do actually think through our bodies (see at least Shusterman [2008]; [2012]), as also from that of a «speculative pragmatism», which is focused on practices that think multiply, making a movement of the body immediately a movement of thought, with the aim of redefining knowledge in terms of doing and gesturing, going explicitly beyond the paradigm of the neurotypical individual (cf. Manning [2009]; [2016]). Similar proposals emphasise – each in its own way – that the body is not just a crucial topic of study, but an essential dimension of experiential learning, i.e. the basic instrument for any human performance – from perception to thought, for there is no mental life without somatic experience. This would challenge the anti-somatic bias by virtue of which intellectuals are generally so interested in the independent life of the mind and spirit that they take the body for granted and do not ask what different “unable” bodies can do, jumping to the (often implicit) conclusion that they are simply “deficient”, thus also incapable of thinking.

But first and foremost, this more comprehensive way of considering our thinking *habitus* becomes salient from the point of view of deaf people, for whom sign language is in effect a true sign thinking (cf. Goldin-Meadow [2005]). Not surprisingly, among the psychological implications of deafness there exists a need for «a nonverbal approach to thinking» which can unveil several discriminatory tenets of our cognitive psychology and philosophy: «the assumption that ability to use language is the gauge of human intelligence and that language is indeed the key to all that is abstract and conceptually mature in man»; «the contingent assumption that language is essential for thinking»; the a priori identification of «“concept” with verbal concept»; the surreptitious implication that «conceptual or abstract thinking *is* thinking expressed in verbal terms»; «the ready association of thinking and language which prevailed in one form or another throughout the history of Western thought and education» (Furth [1966]: 228, 3, 8, 19, 144, 212).

Finally, reexamining the nature of our thinking *habitus* in a radical, pluralistic, inclusive perspective, paying specific attention to those modes of thinking traditionally neglected or worse, can help us be mindful of the dangerous drift from “different cognition” to “lower cognition” and finally to “inferior cognition”, and thus avoid the persistent and well-hidden trap of that anthropological machine which «necessarily functions by means of an exclusion (which is also always already a capturing) and an inclusion (which is also always already an exclusion)» (Agamben [2002]: 37), distinguishing between who is completely human and who is instead diminutively and only partially such. An outcome which no one really desires.

Conclusion

In this paper, I began with Noë's idea that thinking is to be seen as a graphical practice, explicating some of its possible implications – in particular, that thinking consists in an aesthetic habit through which internal pictorial and verbal representations and external pictorial and verbal media march together, and visual and verbal knowledge and reflection cooperate on the common task of reorganizing our activities and lives. This was the initial background for proposing a general and interdisciplinary interpretation of thinking as a *habitus*, which offered an articulation of how verbal and visual thinking unfold, and stressed the entanglement between internal and external dress, that is, between word and image inside the mind and technologies of the word and of the image outside the mind. Afterwards, I claimed that such an interpretation can take charge of two demands which are particularly pressing today. The first comes from the late stages of media history, which vindicates the technologies of the image and directly questions the inherited “mediatic discrimination” that affects how we have been producing, sharing, and conceiving knowledge, and is linked to the joint mediatic primacy of the alphabet and printing. The second comes from the subjectivities that were traditionally excluded and marginalized from knowledge practices and representations, posing the problem of a potential “epistemic injustice” in which visual ways of thinking risk being considered “second-class”, if not even less human, with respect to verbal-written ones.

Considering all this, to conceive of thinking in a radically pluralistic and inclusive way can represent at least a fruitful resource for addressing some of the most urgent anthropological challenges of our time.

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References

- Agamben, G., 2002: *The Open: Man and Animal*, trans. by K. Attell, Stanford University Press, Stanford 2004.
- Antinucci, F., 2011: *Parola e immagine. Storia di due tecnologie*, Laterza, Roma-Bari.

- Arielli, E., 2023: *Agire nell'immagine. Immagini come sostituti e come oggetti di finzione*, in Purgar, K., Vargiu, L. (eds.), *Studiare le immagini. Teorie, concetti, metodi*, Carocci, Roma, pp. 308-324.
- Arnheim, R., 1969: *Visual Thinking*, University of California Press, Berkeley.
- Aydin, C., 2015: *The artifactual mind: Overcoming the "inside-outside" dualism in the extended mind thesis and recognizing the technological dimension of cognition*, "Phenomenology and the Cognitive Sciences" 14 (1), pp. 73-94.
- Baird, D., 2004: *Things Knowledge: A Philosophy of Scientific Instruments*, University of California Press, Berkeley.
- Bermúdez, J.L., 2003: *Thinking Without Words*, Oxford University Press, Oxford.
- Block, N. (ed.), 1981: *Imagery*, MIT Press, Cambridge (MA).
- Blumenberg, H., 1986: *Die Lesbarkeit der Welt*, Suhrkamp, Frankfurt a.M.
- Bourdieu, P., 1980: *The Logic of Practice*, trans. by R. Nice, Stanford University Press, Stanford 1990.
- Bruner, J.S., Oliver, R.R., Greenfield, P.M., et. al., 1967: *Studies in Cognitive Growth*, John Wiley & Sons, New York.
- Calzavarini, F., Voltolini, A., 2023: *The different bases of the meaning and of the seeing-in experiences*, "Review of Philosophy and Psychology", pp. 1-24, <https://link.springer.com/article/10.1007/s13164-023-00677-x>
- Camp, E., 2007: *Thinking with maps*, "Philosophical Perspectives" 21(1), pp. 145-182.
- Carreras, G., 2013: *Philographics: Big Ideas in Simple Shapes*, BIS, Amsterdam.
- Catala, A., Faucher, L., Poirier, P., 2021: *Autism, epistemic injustice, and epistemic disablement: A relational account of epistemic agency*, "Synthese" 199, pp. 9013-9039.
- Clark, A., 2003: *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*, Oxford University Press, Oxford.
- Cohn, N., 2013: *The Visual Language of Comics: Introduction to the Structure and Cognition of Sequential Images*, Bloomsbury, London-New Delhi-New York-Sidney.
- Crevoisier, M., 2009: *La nouveauté de l'image vidéoludique. Remarques autour du régime-silicium de l'image chez Gilles Deleuze*, "Sciences du jeu" 11, pp. 1-24.
- Curtis, N. (ed.), 2010: *Pictorial Turn*, Routledge, London-New York.
- De Kerckhove, D., 1993: *Brainframes: Technology, Mind and Business*, Bosch & Keuning, Utrecht.
- De Mul, J., 2008: *Wittgenstein 2.0: Philosophical reading and writing after the mediatic turn*, in Pichler, A., Hrachovec, H. (eds.), *Wittgenstein and the Philosophy of Information*, Ontos, Heusenstamm, pp. 157-183.
- De Vos, C., De Kerckhove, D., 2013: *Ecrit-Ecran*, 3 voll., L'Harmattan, Paris.
- DiSessa, A.A., 2001: *Changing Minds: Computers, Learning, and Literacy*, MIT Press, Cambridge (MA).
- Drucker, J., 2020: *Visualization and Interpretation: Humanistic Approaches to Display*, MIT Press, Cambridge (MA).
- Eisenstein, E.L., 1983: *The Printing Revolution in Early Modern Europe*, Cambridge University Press, Cambridge.
- Eugeni, R., Catricalà, V., 2020: *Technologically Modified Self-Centred Worlds: Modes of Presence as Effects of Sense in Virtual, Augmented, Mixed and Extended Reality*, in Biggio, F., Dos Santos, V., Thierry Giuliana, G. (eds.), *Meaning-Making in Extended Reality*, Aracne, Roma, pp. 63-90.
- Fernyhough, C., 2016: *The Voices Within: The History and Science of How We Talk to Ourselves*, Basic Books, New York.

- Fingerhut, J., 2014: *Extended imagery, extended access, or something else? Pictures and the extended mind hypothesis*, in Marienberg, S., Trabant, J. (eds.), *Bildakt at the Warburg Institute*, De Gruyter, Berlin, pp. 33-55.
- Fingerhut, J., 2020: *Twofoldness in moving omages: The philosophy and neuroscience of filmic experience*, "Projections" 14 (3), pp. 1-20.
- Fingerhut, J., 2021: *Habits and the enculturated mind: Pervasive artifacts, predictive processing, and expansive habits*, in Caruana, F., Testa, I. (eds.), *Habits. Pragmatist Approaches from Cognitive Science, Neuroscience, and Social Theory*, Cambridge University Press, Cambridge, pp. 352-375.
- Fingerhut, J., Heimann, K., 2017: *Movies and the mind: On our filmic body*, in Durt, C., Tewes, C., Fuchs, T. (eds.), *Embodiment, Enaction, and Culture: Investigating the Constitution of the Shared World*, MIT Press, Cambridge (MA), pp. 353-377.
- Fleming, D., 1996: *Can pictures be arguments?*, "Argumentation and Advocacy" 33(1), pp. 11-22.
- Flusser, V., 1987: *Does Writing Have a Future?*, University of Minnesota Press, Minneapolis, 2011.
- Fodor, J., 2007: *The revenge of the given*, in McLaughlin, B., Cohen, J. (eds.), *Contemporary Debates in Philosophy of Mind*, Blackwell, Oxford, pp. 105-116.
- Fricke, M., 2007: *Epistemic Injustice: Power and the Ethics of Knowing*, Oxford University Press, Oxford.
- Furth, H.G., 1966: *Thinking Without Language: Psychological Implications of Deafness*, The Free Press, New York.
- Goldin-Meadow, S., 2005: *Hearing Gesture: How Our Hands Help Us Think*, The Belknap Press, Cambridge (MA)-London.
- Goody, J., 1977: *The Domestication of the Savage Mind*, Cambridge University Press, Cambridge.
- Goody, J., 1986: *The Logic of Writing and the Organization of Society*, Cambridge University Press, Cambridge.
- Grandin, T., 2009: *How does visual thinking work in the mind of a person with autism?*, "Philosophical Transactions of the Royal Society B" 364, pp. 1437-1442.
- Grandin, T., 2022: *Visual Thinking: The Hidden Gifts of People Who Think in Pictures, Patterns and Abstractions*, Rider, London.
- Hamraie, A., Frisch, K., 2019: *Crip technoscience manifesto*, "Catalyst. Feminism, Theory, Technoscience" 5(1), pp. 1-34.
- Han, B.-c., 2021: *Infocracy: Digitization and the Crisis of Democracy*, trans. by D. Steuer, Polity Press, Cambridge 2022.
- Harris, R., 2009: *Rationality and the Literate Mind*, Routledge, London-New York.
- Havelock, E.A., 1986: *The Muse Learns to Write: Reflections on Orality and Literacy from Antiquity to the Present*, Yale University Press, New Haven.
- Ihde, D., Malafouris, L., 2019: *Homo faber revisited: Postphenomenology and material engagement theory*, "Philosophy & Technology" 32, pp. 195-214.
- Kidd, I.J., Medina, J., Pohlhaus Jr. G. (eds.), 2017: *The Routledge Handbook of Epistemic Injustice*, Routledge, London-New York.
- Kittler, F.A., 1986: *Grammophon Film Typewriter*, Brinkmann & Bose, Berlin.
- Klevjer, R., 2019: *Virtuality and depiction in video game representation*, "Games and Culture" 14(7-8), pp. 724-741.
- Knauff, M., 2013: *Space to Reason: A Spatial Theory of Human Thought*, MIT Press, Cambridge (MA).
- Kondor, Z., 2008: *Embedded Thinking: Multimedia and the New Rationality*, Peter Lang, Frankfurt a.M.

- Kosslyn, S.M., 1994: *Image and brain: The resolution of the imagery debate*, MIT Press, Cambridge (MA).
- Kosslyn, S.M., Thompson, W.L., Ganis, G., 2006: *The Case for Mental Imagery*, Oxford University Press, Oxford.
- Krämer, S., Ljungberg, C., 2016: *Thinking and diagrams – An introduction*, in Krämer, S., Ljungberg, C. (eds.), *Thinking with Diagrams: The Semiotic Basis of Human Cognition*, De Gruyter, Berlin, pp. 1-21.
- Kress, G., 2000: *Design and transformation: New theories of meaning*, in Cope, B., Kalantzis, M. (eds.), *Multiliteracies: Literacy Learning and the Design of Social Futures*, Routledge, London-New York, pp. 153-161.
- Kress, G., van Leeuwen, T., 2001: *Multimodal Discourse: The Modes and Media of Contemporary Communication*, Arnold, London.
- Kress, G., van Leeuwen, T., 2006: *Reading Images: The Grammar of Visual Design*, Routledge, London-New York.
- Malafouris, L., 2013: *How Things Shape the Mind: A Theory of Material Engagement*, MIT Press, Cambridge (MA).
- Manning, E., 2009: *Relationescapes: Movement, Art, Philosophy*, MIT Press, Cambridge (MA).
- Manning, E., 2016: *The Minor Gesture*, Duke University Press, Durham-London.
- Manovich, L., 2006: *Visual technologies as cognitive prostheses: A short history of the externalization of the mind*, in Smith, M., Morra J. (eds.), *The Prosthetic Impulse: From a Posthuman to a Biocultural Future*, MIT Press, Cambridge (MA), pp. 203-219.
- Margreiter, R., 1999: *Realität und Medialität: Zur Philosophie des "Medial Turn"*, "Medien Journal" 23(1), pp. 9-18.
- McLuhan, M., 1962: *The Gutenberg Galaxy: The Making of Typographic Man*, University of Toronto Press, Toronto.
- McLuhan, M., 1964: *Understanding Media: The Extensions of Man*, McGraw Hill, New York.
- Mersch, D., 2016: *Medientheorien zur Einführung*, Junius, Hamburg.
- Meskin, A., Robson, J., 2010: *Videogame and the moving image*, "Revue Internationale de Philosophie" 254(4), pp. 547-564.
- Mirzoeff, N., 1998: *What is visual culture?*, in Id. (ed.), *The Visual Culture Reader*, Routledge, London-New York, pp. 3-13.
- Molinari, J., 2022: *What Makes Writing Academic: Rethinking Theory for Practice*, Bloomsbury, London-New York-Oxford-New Delhi-Sydney.
- Nguyen, C.T., 2020: *Games: Agency as Art*, Oxford University Press, Oxford.
- Noë, A., 2015: *Strange Tools: Art and Human Nature*, Hill and Wang, New York.
- Noë, A., 2023: *The Entanglement: How Art and Philosophy Make Us What We Are*, Princeton University Press, Princeton-Oxford.
- Nyíri, K.J.C., 2002: *Post-literacy as a source of twentieth-century philosophy*, "Synthese" 130(2), pp. 185-199.
- Nyíri, K.J.C., 2006: *Wittgenstein's philosophy of pictures*, in A. Pichler, S. Säätelä (eds.), *Wittgenstein: The Philosopher and his Works*, Ontos, Heusenstamm, pp. 322-353.
- oliSUNvia, 2023: *Drowning in entertainment: The age of distraction*, 1st April, (<https://youtu.be/NJZ5YNrXMpE>).
- Olson, D.R., 1994: *The World on Paper: The Conceptual and Cognitive Implications of Writing and Reading*, Cambridge University Press, Cambridge.
- Olson, D.R., 2017: *The Mind on Paper: Reading, Consciousness and Rationality*, Cambridge University Press, Cambridge.

- Ong, W., 1982: *Orality and Literacy: The Technologizing of the Word*, Routledge, London-New York.
- Paivio, A., 1971: *Imagery and Verbal Processes*, Holt, Rinehart and Winston, New York.
- Paivio, A., 1986: *Mental Representations: A Dual Coding Approach*, Oxford University Press, Oxford.
- Parisi, F., 2018: *Enacting visualization: Mental imagery and the role of pictures*, in Scarinzi, A. (ed.), *Recasting Aesthetic Experience: Emotions and the “Continuity Principle”*, Cu-villier, Göttingen, pp. 96-119.
- Parisi, F., 2021: *Enacting virtual reality*, in Scarinzi, A. (ed.), *Meaningful relations: The en-activist making of experiential worlds*, Academia, Baden-Baden, pp. 245-262.
- Pinotti, A., 2020: *Towards an-iconology: The image as environment*, “Screen” 61(4), pp. 594-603.
- Roessler, J., 2016: *Thinking, inner speech, and self-awareness*, “Review of Philosophy and Psychology” 7, pp. 541-557.
- Roque, G., 2009: *What is visual in visual argumentation?*, “OSSA Conference Archive” 137, pp. 1-9.
- Shusterman, R., 2008: *Body Consciousness: A Philosophy of Mindfulness and Somaesthetics*, Cambridge University Press, Cambridge.
- Shusterman, R. 2012: *Thinking Through the Body: Essays in Somaesthetics*, Cambridge University Press, Cambridge.
- Silcox, M., 2021: *A Defense of Simulated Experience: New Noble Lies*, Routledge, London-New York.
- Sontag, S., 1973: *On Photography*, RosettaBooks, New York, 2005.
- Tye, M., 2000: *The Imagery Debate*, MIT Press, Cambridge (MA).
- Tufte, E., 2020: *Seeing with Fresh Eyes: Meaning, Space, Data, Truth*, Graphic Press LLC, Cheshire.
- Vendler, Z., 1977: *Wordless thoughts*, in McCormack, W.C., Wurm, S.A. (eds.), *Language and Thought*, De Gruyter, Berlin, pp. 29-43.

Notes

- 1 I use the term here as a wider label comprehending all the images currently held under the umbrella of Extended Reality (Augmented Reality + Virtual Reality + Mixed Reality).
- 2 An example is the project *Crippling Times New Roman*, carried out by the scholars and activists Jennifer Scuro (who told me about it), Amy Gaeta, and Jillian Weise, inspired by the principles expressed in Hamraie, Frisch [2019].
- 3 I would like to thank the first anonymous reviewer for raising this issue.

