

TRUTH, TIME AND VISUALITY

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Towards a Theory of Common-Sense Realism

0. The Visual Mind

My aim in the present paper is to outline a specific philosophical strategy for the defense of common-sense realism and the rejection of relativism. The strategy is specific in that it is based on the assumption that the human mind is a visual one – indeed, as I will stress, fundamentally a kinesthetic or motor one. The primary contact we make with reality is not verbally mediated; rather, it is direct, kinesthetic, perceptual, visual.

Now my impression is that the visual approach is still entirely foreign to mainstream philosophy. So let me here begin, so to speak, at an introductory level. Let me perform, in your virtual presence, an experiment. The task is to count the number of ground-floor level windows in the house I live in. Normally, I could just walk around the house, and count the windows. But if I happen to be away, giving a conference talk, I cannot do that. What I can do is to close my eyes, *imagine* going round the house, and *mentally* count the windows. Having concluded the experiment, I come up with the number 10. Perhaps I have made a mistake. If I have, I can, once at home, correct myself by actually walking around and counting. Others are welcome to come to my place and repeat the counting. The result will, perhaps after some initial misunderstandings and explanations, turn out to be the same in every case, and in any conceptual framework. There will be nothing relative about it.

Would you be able to perform a similar experiment? Does everyone have vivid mental images? My understanding is that quite a few people claim not to experience such. And of course this is, famously, what Galton learnt in the 1880s, when sending out a questionnaire asking what kind of visual memories the addressee had of his or her breakfast table of that morning. Did they remember the layout of the items on the table? Did they remember colours? It was, mostly, well-educated adult males, having spent a lifetime with reading and writing, who replied that they had no visual recollections whatsoever, no visual mental images. Galton was baffled, and tried to find a solution to the problem: how do then these people manage to *think* at all? His solution:

[...] the missing faculty seems to be replaced so serviceably by other modes of conception, chiefly, I believe, connected with the incipient motor sense, not of the eyeballs only but of the muscles generally, that men who declare themselves entirely deficient in the power of seeing mental pictures can nevertheless give life-like descriptions of what they have seen and can otherwise express themselves as if they were gifted with a vivid visual imagination (Galton 1907 [1883]: 61).

Not only in the case of memory images, but more generally, too, there is the motor dimension beneath the visual one. Facial expressions and gestures precede words both in the evolution of mankind and the development of the individual. This is an ancient insight, formulated by Plato already, insisted on also by Thomas Reid, the emblematic figure of common-sense philosophy. Reid was impressed by what he saw as “the natural signs of human thoughts, purposes, and desires [...] the natural language of mankind. An infant,” Reid wrote, “may be put into a fright by an angry countenance, and soothed again by smiles” (Reid 1769: 89). This became a great subject for Darwin, too. A topic he was particularly fascinated by was the expression of attitudes such as affirmation and negation. To quote just two brief passages: “[a] man [...] who vehemently rejects a proposition, will almost certainly shut his eyes or turn away his face [...] in refusing food, especially if it be pressed on them, children frequently move their heads several times from side to side, as we do in shaking our heads in negation” (Darwin 1872: 32, 273). Some years later Mallery, in his *Sign Language Among North American Indians*, described the gesture of “negation [...] expressed by the right hand raised toward the shoulder, with the palm opposed to the person to whom response is made. This is the rejection of the idea presented” (Mallery 1881: 290). And let me here add a one-sentence third quote, written a century later by the prominent scientific realist Wilfrid Sellars, in a late paper of his where he as it were stepped back from the linguistic bias so characteristic of his major works: “The concept of *rejection* is more basic than the concept of negation” (Sellars 1981: 342).

Gestures do more than just express attitudes. The art theorist and Gestalt psychologist Rudolf Arnheim in his *Visual Thinking* speaks of “descriptive” gestures,

[...] those forerunners of line drawing. [...] the perceptual qualities of shape and motion are present in the very acts of thinking depicted by the gestures and are in fact the medium in which the thinking itself takes place. These perceptual qualities are not necessarily visual or only visual. In gestures, the kinesthetic experiences of pushing, pulling, advancing, obstructing, are likely to play an important part (Arnheim 1969: 117 f.).

Arnheim's views on visual imagery and the motor have been strongly influenced by the prominent turn-of-the-century American psychologist Titchener. According to the latter, "[m]eaning is, originally, kinaesthesia; the organism faces the situation by some bodily attitude" (Titchener 1909: 176). Words build on imagery, but imagery, Titchener stressed, builds on kinaesthesia. Titchener's position was taken up and radicalized by Margaret Washburn. As she put it: "the whole of the inner life is correlated with and dependent upon bodily movement" (Washburn 1916: xiii).

To round out and sum up: Verbal language emerges from the natural language of facial expressions and gestures, which are movement and image at the same time. Our core vocabulary gains meaning from the visual and motor images it is based on (our extended vocabulary consists of metaphors, but to understand a live metaphor¹ it is necessary to grasp the images it evokes). The human mind is primarily visual and motor. It is not through the mediation of words we make contact with reality, but through direct perception, with visual perception playing the definitive role.

1. Realism vs. Relativism

The sentence I concluded the previous section with amounts to a partial – rudimentary – description of, and argument for, my position: common-sense realism. Now realism – as also anti-realism, thus also relativism – seems to come in innumerable varieties. Let me here print an oft-visited diagram (cf. *Figure 1*) from the internet (W1), and let me make some comments. First, common-sense realism is mistakenly said to be "naive"; it is a sophisticated philosophical position; the views of the common man in the street do not yet amount to a philosophy of common sense.

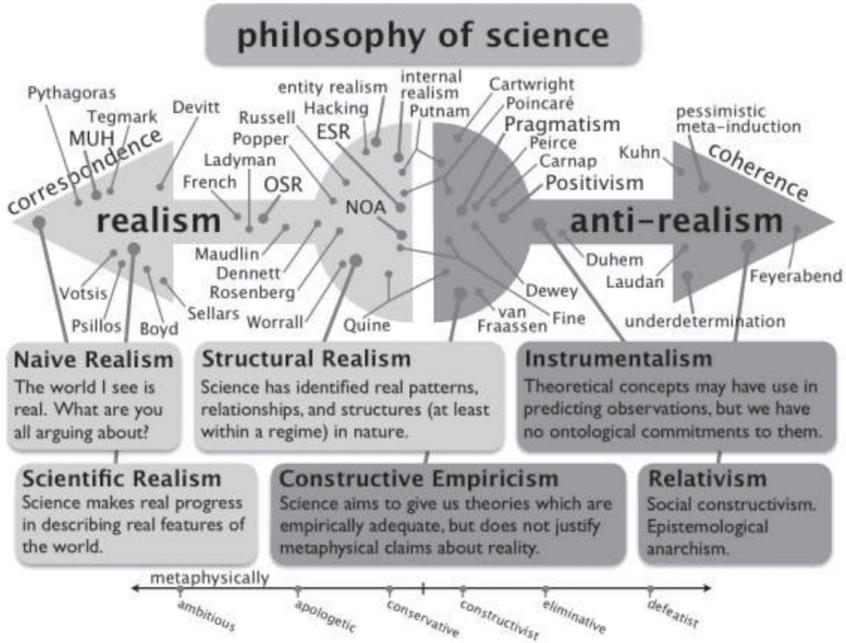
Secondly, I suggest that common-sense realism is the only realism worthy of the name, all other "realisms" are phoney compromises.² Thirdly, I have to point out that non-relativists of course have a hard time understanding the fine distinctions relativists make between varieties of their creed; they find it difficult not to

1 On image and metaphor see Nyíri 2014: 30, 89, 93 f., 99 f.

2 I feel it particularly important to say this when it comes to today's so fashionable "structural realism," see my argument in the chapter *Visualization and the Horizons of Scientific Realism* (in Nyíri 2014, see there esp. p. 33). In the diagram above, ESR stands for "epistemic structural realism," OSR for "ontological structural realism" (and NOA for "natural ontological attitude").

see relativism and social constructivism as belonging to the same continuum; and they believe any relativism, if it goes beyond the obvious, is false.

Figure 1: Diagram: Philosophy of Science



(source: W1)

A relativism clearly going beyond the obvious is “epistemic replacement relativism”. In a recent defence of this approach, taking issue with Paul Boghossian, Martin Kusch wrote:

[...] Galileo recognized that facts about motion are relative facts. [...] Galileo showed that [...] utterances of the form ‘x moves’ are untrue – they are either false or incomplete. Moreover, Galileo also pointed out that the closest truths in the vicinity of these untruths are relational truths of the form *x moves relative to frame of reference F*. This makes it natural to suggest that Galileo was asking us to change the way we speak: *replace* the nonrelativized sentences with relativized ones, and assert only the relational propositions. [...] Galileo’s relativism is the paradigm instance of the template of “replacement relativism” (Kusch 2010: 165).

In his analysis, Kusch suggests the formula: “our epistemic system [...] is one of many equally valid epistemic systems” (Kusch 2010: 170). And he makes it clear that this is a formula that actually expresses his own position.

We have here a clear example of what one might call the *linguistic bias in philosophy* – note that people basically do not *speak* about movement, they *see* it and *experience* it. And when – rarely – they *do* experience relative movement, they as a rule, sooner or later, discover that they were suffering from an illusion. Enlightened common sense today understands that the Earth’s immobility is such an illusion. But I wonder if one should convince enlightened common sense to accept relativism. In fact, I am sure one should not, because mankind’s survival chances would thereby probably diminish. This is an age-old argument, but let me refer here to three more or less recent, important works once again formulating it.

First, to *The Rediscovery of Common Sense Philosophy* by Boulter, stressing that “natural selection favours those organisms whose perceptual systems generate visual perceptions which happen to correspond structurally more closely to that of the environment itself” (Boulter 2007: 114). Secondly, to Lynd Forgyson’s *Common Sense*, putting forward the “guiding idea” that “the individual members of our species would not get along as successfully as they do on this earth if their common-sense beliefs about the world [...] were not for the most part true” (Forgyson 1989: iv). And thirdly, there is the devastating paper by Susan Haack, *Reflections on Relativism*, beginning with the observation: “‘Relativism’ refers, not to a single thesis, but to a whole family. Each resembles the others in claiming that something is relative to something else; each differs from the others in what it claims is relative to what” (Haack 1998: 149). Haack takes the side of common-sense realism, with a subtle version of her own she calls “innocent realism,” holding that “[p]erception is interpretative; but it is also direct” (Haack 1998: 161).

2. Scientific vs. Common-Sense Realism

What relations do obtain between common sense, common-sense realism, and scientific realism? The world of common sense is that of everyday time and space, of persons, objects, of *observable* entities, perhaps also of God, but on this latter point views begin to differ: William James believed the idea of God to be part of the common-sense world-view, G. E. Moore did not. Also, Moore held that common-sense truths were timeless, not open to revision by the progress of science. Moore’s friend Wittgenstein, by contrast, tended to suggest

that the task of philosophy was actually to enable common sense to integrate the ever-evolving discoveries of the natural sciences. I understand Wittgenstein as striving to make the seemingly contradictory views of the scientist compatible with “the coarse views of the man in the street” (see Nyíri 2015 and Nyíri [forthcoming]).

While the common-sense world is that of observable objects, modern science is positing *unobservable* entities in order to explain the observable world. Scientific realism holds that the unobservable entities posited by science are real. By implication, some or all of the entities of the common-sense world might turn out to be mere appearances. In an encompassing and profound analysis Sellars comes very close to conclude that the scientific image of the world will ultimately supplant the common-sense (the “manifest”) one (Sellars 1963: 19, 27, 31 f., 36–39). By contrast, Michael Devitt in his brilliant book *Realism and Truth* argues that “scientific realism does not undermine common-sense realism” (Devitt 1997: 5 and 81 f.). He believes that common-sense realism does not need to defend itself by having recourse to operationalism or instrumentalism – to positions maintaining that “unobservables are simply ‘useful fictions’”. These positions, in Devitt’s view, require *observability* to have “an epistemic significance which it cannot have” (Devitt 1997: 127). Now I can agree neither with the main drift of the argument Sellars puts forward, nor with the particular point Devitt makes about instrumentalism. Enlightened common sense should not, and cannot, give up its primacy over science. And I suggest that we are indeed justified in taking some scientific theories to be purely instrumental; however, here our guiding criterion should be *not* observability, but rather *imaginability*. We cannot imagine what we cannot *visualize*. We cannot visualize say quantum theory,³ or time as the fourth dimension of space. The limits of scientific realism should be drawn at the point where the possibility of visualization ends.⁴

3 Devitt concedes that quantum theory is perhaps “not to be trusted at this stage as a guide to reality” (Devitt 1997: 132), but he does not formulate a general framework within which such a concession would naturally emerge.

4 This is the position I argue for in my paper *Visualization and the Horizons of Scientific Realism* (Nyíri 2014: 21, 23 f., 30–33).

3. Seeing Is Knowing: Realism Defended

Both “seeing” and “knowing” are words with a wide variety of meanings – the above subtitle is not meant as a well-defined proposition, it is just meant to convey the idea that by looking at the world we are gaining real knowledge of it.⁵

3.1 The Visible World

Our mind is attuned to seeing, because there is a world with visible properties. This common-sense assumption has been analyzed, and corroborated, by an extensive and ramified body of literature. Here I have to restrict myself to just four – carefully chosen – references. The first one is to psychologist J. J. Gibson, who in a number of influential papers and books, from the 1950s on, formulated a new – he termed it “ecological” – theory of vision. In his essay *New Reasons for Realism* he explains that “[t]he structure of an array of ambient light from the earth” displays “invariants [...] specific to the substances of which objects are composed, to the edges of objects, and to the layout of their surfaces,” adding some pages later: “The doctrine of secondary qualities comes from a misunderstanding” (Gibson 1967: 164, 170). My second reference is to Arnheim once more, in particular to his formula “The mind cannot give shape to the shapeless” (Arnheim 1969: 90), conveying a basic Gestalt message. Thirdly, I refer to the important 1995 paper on common sense by Barry Smith. Elaborating on Gibson’s theory, Smith offers a sustained argument in favour of the idea that the colours, tones, shapes, etc., that determine our perceptions and actions are to be “conceived as qualities of external things” (Smith 1995: 647). And lastly, I come back to Boulter, whose “transcendental argument for common sense in the domain of sense perception” again builds on Gibson. As Boulter concludes: “An external, *pre-structured* world is the source of the structure found in optic arrays. [...] Without a pre-structured world there is no visual perception” (Boulter 2007: 107, 111). Let us draw the threads together. We are justified to regard edges, surfaces, shapes and colours to be objective visible properties of an external world.

5 A fascinating discussion of the topic “seeing” vs. “knowing” is given by Gombrich (1960, cf. there esp. pp. 12–14, 247 and 277 f.); on p. 277 and on p. 357 in the corresponding note with reference also to Bernard Berenson’s notorious book (Berenson 1953).

3.2 The Visual Road to Realism

A royal road to acquire a grasp of the essential argument for visual realism and against visual relativism is to follow the journey of Gombrich from the first edition of *Art and Illusion* (1960) to his final and devastating critique of Goodman's irrealism, in a talk he gave in 1978 (Gombrich 1981 [1978]). I have provided an overview of that journey in an earlier essay of mine, writing:

1972 saw Gombrich's first direct attack on Goodman, the former's main contentions here being that "Goodman appears to think that the eye must be strictly stationary" whereas "no stationary view can give us complete information," and [on the other hand] that the pictorial technique of *perspectival representation* reflects something essentially natural and objective – it does not need to be learned to be decoded. The second, devastating, attack came six years later, with Gombrich's paper *Image and Code: Scope and Limits of Conventionalism in Pictorial Representation*, vindicating the common-sense idea of pictures as natural signs, and explicating the controversial concept of *resemblance* by that of *equivalence of response*. As Gombrich here momentarily puts it: "the images of Nature, at any rate, are not conventional signs, like the words of human language, but show a real visual resemblance, not only to our eyes or our culture but also birds or beasts" (Nyíri 2014 [2009]: 55 f.).

A longer journey is the one beginning with the first generation of Gestalt psychologists. I will just quote Wertheimer and Koffka. In 1923 Wertheimer wrote: "Our nervous system developed under the conditions of the biological environment; the Gestalt tendencies which were formed in that process do not by a miracle correspond to the regular conditions of the environment".⁶ A related observation by Koffka: "in reality our world is [...] not [...] a burlesque nightmare; as a rule, things are what they look like, or otherwise expressed, their looks tell us what to do with them, although as [...] optical illusion[s ...] show [...], perception may be deceptive" (Koffka 1955 [1935]: 76).

Of the second generation, Arnheim was a leading member. He adhered to the Gestalt school's founding view that experiencing images necessarily involves experiencing the patterns of forces they embody and convey. This applied to the images provided by our physical environment, but also to mental images, as well as to artificial images such as drawings, paintings, photographs and of course films and videos. Discussing memory images, Arnheim called attention to the "[f]orces inherent in the shape itself"; analyzing children's and adult amateurs' drawings, he

6 My translation. The original German runs: "Das Nervensystem hat sich unter den Bedingungen der biologischen Umwelt ausgebildet; die Gestalttendenzen, die sich dabei ausgebildet haben, sind nicht wunderbarerweise den regulären Bedingungen der Umgebung entsprechend..." (Wertheimer 1923: 336 f.).

wrote of the “configurations of forces discerned in the draftsman’s world and interpreted in his pictures” and the “constellation of forces that underlies the theme of the picture” (Arnheim 1969: 81, 259, 262).

4. Conclusion

In the wake of Arnheim, let me here make two comments which will bring me to the end of my paper. First, if the images provided by the world around us act like physical forces, then clearly they provide us with direct contact to reality. Secondly, reality can be depicted in various styles (Arnheim lays great stress on the realism of children’s non-naturalistic drawings), contemporary enlightened common sense however does indeed set priorities between those styles, according to the practical task at hand. Children might depict reality in peculiar ways, but we have no reason to suppose that the visual world seems different to them from the way it seems to us. To quote Devitt: “Why does the world seem the way it does? The obvious answer is that the world seems that way because it *is* that way,” a correspondence easily explicable “along Darwinian lines” (Devitt 1997: 74, 78). To some animal species the world of course might even *seem* different. However, as Boulter points out: “The fact that an organism’s perceptual systems do not pick up or respond to *all* of reality does not imply that what they do pick up are not objective features of an extralinguistic reality” (Boulter 2007: 103).

To sum up: By integrating new scientific results, common sense is historically evolving. Still, contemporary enlightened common sense, guided by the philosophy of common-sense realism, has a conservative view of scientific discoveries: it does not accept the view that scientific change implies radical changes in ontology. Hence contemporary common sense does not have room, just as common sense never had room, for relativism. Common sense believes that it relies on the best available sources of knowledge. It understands that it might hold erroneous views, but trusts that progress will correct them. Epistemic systems different from its own it cannot but consider simply wrong.

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Sybille Krämer

Truth in Testimony: Or can a Documentary Film ‘Bear Witness’? Some Reflections on the Difference between Discursive and Existential Truth

1. *Svjedok – The Witness* (2012), a Film by Haris Bilajbegovic

31 May 1992: A Bosnian village in the Sanski Most region of Bosnia-Herzegovina is raided by Serbian militiamen. The male inhabitants are then rounded up and forcibly led to a bridge. Four of the men have already been shot along the way; the others must jump individually from the bridge into the water. While swimming in the water they are then killed one at a time by volleys of gunfire. Only one man, Rajif Begic, survives this campaign of execution by removing his T-shirt after jumping in the water and allowing it to float downstream. While the T-shirt is riddled with bullets, he is able to save himself by concealing himself in bushes. Ten years after this event, Begic testifies before a tribunal in The Haag that is pursuing criminals in the Serbian army under the command of Goran Hadzic and Ratko Mladic. Begic’s statements lead to the conviction of the principal offenders who directly participated in the bridge murders. The survivor of a war crime becomes its only and most relevant witness.

An Austrian with Bosnian roots, Haris Bilajbegovic, filmed a documentary about this event, in which he himself lost an uncle, and his Bosnian grandfather thus lost a son. His film *Svjedok – The Witness* premiered in 2012. The film was nominated for the German Human Rights Film Award, is available on DVD, and can be seen on Youtube. It was broadcast on Austrian television on the 20th anniversary of the Srebrenica massacre on July 25th, and was broadcasted again on July 30th, 2015. Rajif Begic’s story constitutes the chronological axis of the film, and he is mostly filmed in close-up, like in interviews with Holocaust survivors. Within the film Rajif Begic also performs a plurality of witness functions at the same time: The film incorporates archival recordings of his testimony before the international criminal court, in which he serves as a *legal witness*. In the close-ups of his face and hands filmed in the studio, he reports on the event as a *contemporary witness*. He also walks through the original locations where the event took place and thus acts as a *witness of “oral history”*. As a survivor, he also finds himself

in the position of a *moral and political witness* who attempts to give a voice to those who were silenced by death.

Furthermore Begic's descriptions are followed by a reenactment of scenes of the event,¹ which are staged like a feature film; the roles of the victims and the perpetrators are played by the inhabitants of the raided village themselves, and these scenes are filmed at the original locations where the event took place. Lastly, these scenes are intercut with shots of skeletonized remains that were excavated from the area around the bridge and later evaluated as DNA traces that match the victims of the massacre; their deaths are thus "proven" through evidence.

The film claims to depict a real event, as what it represents is factual rather than fictional.

But is it even possible for a film to raise a *truth claim*? What we see is an artificial world of moving images: actors performed the events reported by the witness in the film. These scenes were also staged, edited, combined, and assembled by the filmmaker. As a produced artwork, the film belongs definitely to the realm of the fictional. What entitles us to think that the events presented in the film are established facts that we truly *know* and not only *believe* after watching the film?

2. On Truth

Since Gottfried Wilhelm Leibniz, the concept of "truth" is seen as the truth not of things but rather of *propositional sentences* (Leibniz 1966: 15–21). Truth is associated with language. The pragmatic philosophy of language of the twentieth century made this insight even more radical: truth is assigned not simply to sentences but rather to *statements* produced in communicative, dialogical situations. A question of truth only emerges when the truth claim of a statement is doubted by someone else, and grounds for justification must or at least can then be given. I will call this the *discursive or propositional truth*, which has two characteristics:

- (i) In the case of a truth statement, it must be possible to separate its genesis and validity. In other words, the grounds for justification must be independent of the individual history of the person who justifies the statement as well as the specific situation in which something was recognized and discovered. Truth is something that not only matters from the subjective perspective of a speaker but is also objectively valid from a *third-person* perspective.
- (ii) If objective truth is connected to the medium of language, then it is "located" in a speech act in which one person claims something to another. Visual

1 For a discussion of artistic reenactment practices see Lütticken ed. 2005.

images or films are characteristically different from languages – for example, images cannot negate something. According to this *discursive* concept of truth, images cannot be carriers of truth.

3. The Dilemma of Witnessing

When viewed from the perspective of the discursive concept of truth, the act of bearing witness leads to a dilemma. Witnessing is necessary when there is uncertainty about the course of events: someone who was physically present at the event reports his or her perception of the situation, and he or she does this in the presence of addressees, who have no access to the past event themselves. The subjective experience of the situation is expressed in an intersubjectively understandable language so that the jury judges or accepts the testimony of the witness to be true. Witnesses witness by *saying* something. This constitutes the core of our understanding of witnessing.

However, the verbalization of an experience opens up the possibility of errors and lies. Practices like oaths and vows in legal contexts – even though they are disappearing – point to this problem. At the same time, we know that nothing is as susceptible to error as a witness report (Ross–Read–Toglia ed. 1994). It is empirically certain that half of all eyewitnesses are wrong. *Every* testimony thus has the potential to be false, and this possibility becomes even more precarious when a witness is the *sole* witness. The dilemma associated with eyewitnessing can be expressed this way: speaking the truth constitutes the foundation and function of witnessing, yet at the same time nothing is as fallible and prone to error as witness testimony.

It is no wonder that the claim to truth of testimony is fundamentally questioned in philosophy – and from entirely differently positions (for an overview: Gelfert 2014: 95–124; Fricker 1995). In the context of an individualistic conception of knowledge, according to which everyone must be able to justify what he or she knows through his own cognitive resources, *no* knowledge can be transmitted through the words of others. Testimony is only epistemically valid when its receivers are able to verify the claims of the witness with their own epistemic abilities, such as memory, perception, and reasoning. Its consequence is a philosophical skepticism with regard to testimony: witness statements do not create objective knowledge unless the transmitted information can be traced back to other forms of evidentiary and corroborating knowledge in the third-person perspective. It is only in this case that there is a separation possible between origin and validity.

Jacques Derrida also questions the claim to truth of testimony, as it creates not a fact but rather a fiction (Derrida 2000: 147–182; Derrida 2003). Witnessing thus

requires an act of belief on the part of the listener. “I testify” means “you must believe me” (Derrida 2000: 159). Derrida separates testimony from the realm of knowledge and moves it into the domain of belief; the relation to truth of witness testimony is thereby eliminated.

Traditional skepticism with regard to testimony and the poststructuralist fictionalization of testimony thus converge in the problematization of the truth content of witnessing. Testimony does not create evidence, and it is not proof – otherwise it would no longer be testimony. It is impossible to separate what the witness communicates from his or her own personal perception and experience. The irreversibility of the past event combined with the first-person perspective of the witness’s perception of the event makes it impossible for witness knowledge to be independently verified and justified. This is the epistemic dilemma of testimony.

But is this combination of speech act, evidence, proof, justification, and truth the only possible form of truth that can play a role in witnessing?

I want to argue that there is another significant form of truth involved in witnessing, which is not attributed to verbal statements but rather to people. Moreover, the specific quality of this form of truth is that it cannot be stated, but rather “only” *shown* and thus made *visible*. But how is this other form of truth to be understood (Krämer 2016a)?

4. Existential Truth: Søren Kierkegaard

Kierkegaard develops two concepts of truth, which are derived from the difference between “knowing a truth” and “being a truth” (Kierkegaard 2012: 215). In so far as truth is linked to knowledge it can be formulated in language; methodically acquired and justified; intersubjectively transmitted, taught, and learned; and embodied in text and speech. However, the kind of truth that Kierkegaard sees embodied by Jesus in his religious role as Christ is entirely different. This form of truth has a performative dimension, as it cannot be taught but rather only lived; its existence is thus *shown* and then (re)enacted by other people in their own lives (Kierkegaard 2012: 214).

This is a truth that is inseparable from the path by which it is acquired. With questions of knowledge – according to Kierkegaard – the discovery of a new finding is supposed to be time-consuming; once it is part of the knowledge system, it is no longer necessary for others to follow the path of its discovery. Truth that consists in being rather than knowledge is different, however, as its origin and validity cannot be separated and it is not predicated on propositions but rather on people. I will call this “existential truth”.

For Kierkegaard, the aim of “witnessing” is this existential truth. In religious testimony, for example, Christ does not speak the truth but rather *shows* it (Kierkegaard 2012: 213). This testimony requires its listeners to believe.

Kierkegaard thus does not open up Derrida’s opposition between knowledge, which is capable of truth, and belief, which is not. The sphere of belief itself characteristically involves an “either/or” decision that cannot be resolved by thought, reason, method, and knowledge; rather, it is a situation that requires a “leap.” For Kierkegaard, the origin of ethics lies precisely in this absolutely understood “either/or” (Kierkegaard 1998: 727). Yet, if believers lack a guiding method, then how is this either/or to be decided? What is the determining factor in the choice between different possibilities?

Kierkegaard’s answer is “authority” (Kierkegaard 2012: 302). Authority is the attribute of a person who speaks and acts in the name of an entity that transcends the individual. In its weak form it is the authority conferred by an office or the authority of parents with respect to their children. In its strong, paradigmatic form it is the religious authority of the apostles, which is based on being the emissaries of a message that they themselves did not create: they speak and act not on their own behalf but rather in the name of an entity who has authorized them (Kierkegaard 2012: 301–315).

5. The Second Person Model of Witnessing

It is surely irritating that this kind of truth is not propositional, that it only manifests in real life, that it requires a leap into uncertainty, and that its only guarantee is belief in an authority. Yet this conceptual constellation intersects at an interesting point with the contemporary postanalytic debate over testimony – albeit without reference to Kierkegaard and with the crucial difference that concepts like testimony, authority, trust, and belief can actually generate a form of *knowledge*. This is the second person model (McMyler 2011: 91–112).

Remember that knowledge from the third-person perspective means that a speaker can give reasons for his assertion, which listeners can understand and recognize. If this is the case, then the knowledge that arises is based on evidence. However, the second person model assumes that there are legitimate forms of knowledge that are not based on evidence and thus grounded in the third-person perspective. The second person model deploys a social theory of knowledge: as a result, evidence is replaced by concepts of social interaction, such as “trust” and “authority”. Thomas Reid already demonstrated that knowledge is a “social operation of the mind” (Reid 2002: 68). Individuals are not epistemically autonomous, but rather mind and knowledge emerge through cooperative social

activities.² The social theory of knowledge generation emphasizes that “telling” – the transmission of content via speech, image, and writing – can still be accepted as knowledge without independent verification and justification. This “telling” takes many forms: it begins when we ask strangers for the time, when we hear news on television, when we divide numbers without understanding why the division algorithm works, and when we obtain information through Wikipedia or printed encyclopedias. It also occurs when bearing witness to perceptions to addressees who were not present at the perceived event. Telling is *not arguing* (Moran 2005: 1–29): it does not provide reasons for what is told, and the audience is not able to judge the truth content of what is told on their own. This is precisely the situation of our epistemic dependence on the knowledge of others (McMyler 2011: 142). It does not negate the creation of knowledge from testimony, but rather it *defers* its justification. The speech act of the witness is not an assertion, but rather an assurance (Moran 2005: 7). The witness gives the audience a guarantee that he will assume responsibility for his statement if problems and doubts should arise. As with every guarantee, it thus concerns future behavior. The authority of the witness consists precisely in issuing a guarantee for his own statement. And the audience recognizes this authority if and only if it accepts this guarantee, trusts the witness, believes in him, and accepts the truth of his testimony (McMyler 2011: 113–140).

Kierkegaard’s belief in the religious authority of the apostles as the emissaries of God thus became trust in the epistemic authority of the witness as the emissary of an experience that the listeners do not share. In the case of witnessing, however, there is one crucial condition that enables the social configuration of assurance, authority, trust, telling, and believing and creates new knowledge: the witness must not only speak, but also *address* his listeners directly. The realization of authority and trust as complementary sides of a reciprocal social relationship in the form of the second person model is thus based on the direct speech associated with the telling of testimony.

6. A Documentary Film as Testimony?

This brings me back to the film *Svjedok – The Witness*.

A documentary film claims that what it shows is not invented but rather found. For Dirk Eitzen, the crucial criterion for distinguishing between documentary and fictional films is the question “could it be a lie?”³ At the same time, Eitzen also

2 For the foundational function of cooperation and agreement see: Kusch 2002.

3 “A documentary is any motion picture that is susceptible to the question ‘Might it be lying?’” (Eitzen 1998: 13).

emphasizes that the genre boundary between documentary and fictional films is ambiguous, as it depends on whether recipients interpret a film as real or fictional. Accepting a film as a documentary means that the public trusts the film and the filmmaker.

The phenomenon of witnessing is linked to documentary films through the uncertainty concerning the reality content of a spoken or filmic statement and the trust that is either given or refused to a witness or a film. I argue that the film *Svjedok – The Witness* introduces a third possibility with respect to the “mere” documentary film, on the one hand, and the “mere” witness statement given in the physical presence of receivers, on the other hand, in so far as it is not simply a documentary *film* but it also provides *testimony*. The hypothesis, therefore, is that the film *Svjedok – The Witness* not only filmically represents the act of bearing witness but *is* itself also a testimonial (Krämer 2016b).

But how can a film that – from a media-technical perspective – is undoubtedly staged by the filmmaker and addressed to an anonymous public, who must forego the co-presence between the witness and the audience that is constitutive of witnessing, nevertheless *bear witness*?

Keep in mind that eyewitnesses do not simply act as causal tracers of an event – if that were the case, they would function as evidentiary proof; rather, eyewitnesses act *symbolically* by means of linguistic *representations*, and it is precisely this speech act – the discursification of their experience – that opens up the possibility for error or even intentional lies, while at the same time allowing them to assume responsibility for and offer a guarantee of the truth content of their speech. The truth content of testimony is always only “promised” and “assured,” but never made evident as proof.

The witnessing film functions in a similar way, as the staged and composed sequences of images cannot be proof of truth, but they can raise a claim to reality insofar as it is self-referentially marked in the film that the world it symbolically generates and presents is just like the real world. Viewers should *not* perceive the film as real in the sense of a photograph, which is impressed as a trace on a sensitive surface by a constellation of light and a chemical reaction at a specific moment in time. Rather, the film should be seen *as if* it is the reproduction of a historical event. This “as if” highlights a gap that cannot be skipped over and a persistent uncertainty on the part of viewers. This is precisely the “usual” situation of an audience faced with witness statements: the speech of witnesses is supposed to be perceived *as if* it were true, yet without the certainty that it is.

Remember that the second person model overcomes this veracity gap in that testimony does not function as proof, but nevertheless transmits knowledge by

virtue of the personal address of the witness, which transforms his statement into the promise of a guarantee. Yet this is precisely foreclosed by the mass-media construction of the film and the anonymization of the public.

Could there be a filmic equivalent of the cooperative social relationship between a witness and his audience? One answer comes to mind: couldn't the filmmaker, as the author of the film and the *representative* of the witness, stand surety for the promise of truth connected with his film? This would be a classic case of "secondary witnessing" – a concept developed in connection with survivor testimonies, particularly in relation to the Holocaust.

7. Secondary Witnessing?

The often-cited last line of Paul Celan's poem *Ashes-Glory* claims that "no one bears witness for the witness," yet the empathic and often videographic "work" with survivors of the Holocaust is based on the guiding principle of *secondary witnessing* (this concept goes back to de Pres 1976 and Langer 1991; Laub 1992: 75–92). According to the proponents of this idea, the experience of violence traumatizes its victims so intensely that they can only be brought to articulate their experience through active, empathic listening. The person who appeals to the witness thus becomes a co-producer of the testimony,⁴ which gives rise to a kind of "representative witnessing" (Weine 2006: 11).

But this approach to survivors poses a problem. However much the self-understanding of the interviewer as co-creator is necessary in clinical and therapeutic contexts (see Weine 2006), the self-empowerment of the "representative witness" or secondary witness remains problematic. Is the "earwitness" supposed to be "the redeemer of the eyewitness" (Schneider 2007: 65)? Concepts like "representative witnessing" tend to negate the difference between those who were exposed to traumatizingly violent situations and those who were not. The sublime structure of witnessing, which is based on the gap between the witness, who is physically and psychologically involved in an event, and the addressee, for whom the past event embodies an inaccessible past, thus collapses in a way that to some extent levels the unattainable position of the witness.

"Secondary witnessing" cannot compensate for, much less suspend, Paul Celan's "no one bears witness for the witness".

Questioning the relationship between the filmmaker and the interviewed and filmed survivor witness nevertheless points in a compatible direction.

4 "[T]estimony must be co-created by a survivor and an authoritative listener [...]" and "the listener actually know more than the survivor" (Weine 2006: 33).

I argue that *Svjedok – The Witness* can be understood as not only a documentary film but also a form of “testimony” because the medium of film instantiates a social relation between the survivor witness and the filmmaker. This is *not* the contract-oriented relation between an actor and a producer or the secondary witnessing of the filmmaker with respect to a victim and a survivor. Rather, the way the filmmaker made the film demonstrates his trust in the witness’s description of the events. The film is thus a testimony not to the catastrophic event that it superficially depicts – the witness report of a war crime – but rather to the profound *friendship* and personal connection between the witness and the filmmaker. The style of the film embodies a form of sociality that – communitarianly extended (Froger 2014: 73) – can also make the viewers part of the community created by the film; a community whose bond is the political-ethnic solidarity created by the survivor testimony in the film.

8. Summary

Is it sufficient to say that the film *Svjedok* – beyond what it implies about the documentation of an event – consists in the creation of a social relation between the filmmaker and the witness, and that this social relation also “invites” viewers to establish this kind of connection?

The creation of communitarian connections through the viewing of documentary films goes back to Marion Froger. She refers to the cultural-anthropological phenomenon of the gift: with some documentary films, the “informational value of the image” recedes behind the film’s function to create a “communitarian connection” between the filmed person, the filmmaker, and the film viewer (Froger 2014: 76).

Gifts make relationships.⁵ In terms of social anthropology, the gift is an act that creates a form of community that is not based on the validity of conventions, rules, and laws. Rather, it creates social relations that differ from the functional relations regulated by law, politics, and the economy and that produce instead a sense of mutual closeness, which is typical of spatial, neighborly, familiar, and ethnic communities. *Friendship* paradigmatically embodies such an “unregulated” sociality.

The executions that took place on the bridge, which took the lives of Rajif Begić’s brothers and Haris Bilajbegović’s uncle, accidentally brought them into a fateful connection. Through the film this accidental connection becomes an intentional collaborative project, in which they both follow the impulse to give a

5 On the relationship between giving and testimony see Derrida 1994.

voice to the Bosnian war dead. The film thus creates a second-person relationship that can be described in terms of “giving”: Haris Bilajbegovic *gives* the surviving witness a filmic space of public attention for his story, and he *bestows* almost blind faith in what the survivor reports by staging the reconstructed scenes in a “live” mode that conveys a sense of the real presence of true events. He also *contributes* to its documentary authenticity by simultaneously embedding evidence and archived recordings into the story.

Conversely, Raijf Begić’s story *gives* an answer that the filmmaker had long sought in order to be able to reconstruct the event on the bridge, which also affected his family. The survivor thus *entrusts* himself to the filmmaker as a person who is intimately familiar with the means of representation: he exposes himself through this disclosure and reveals himself to the anonymous public. It also takes courage to admit to being an eyewitness twenty years after the crime and to contribute to the conviction of the perpetrators in The Haag.

The filmmaker and the witness are both giving; they are also both receiving.

The production of the film thus establishes a network of consent for those who took part, which also includes the inhabitants of the Bosnian village who performed in the staged scenes and whose roles were divided into those of victims and perpetrators. Making the film and participating in the film is *an act of connection*, perhaps even an act of friendship, but in any case an act of social cooperation, political articulation, and ethnic identification. What is verified is not simply a testimony, but rather a social relation that emerges in and through the film.

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Valeria Giardino

Space and Action to Reason: from Gesture to Mathematics

1. The Target: Tools for Thought

In our cultural evolution, humans have created several instruments, not only with the intention of surpassing their physical limits – think of a hammer or a pair of glasses – but also with the aim of enhancing their memory and inferential powers; consider for example a map or the abacus. In the present paper I will focus on tools for thought. How do they work? Or, to clarify, how do we work with them?

In her article in the fourth volume of the *Series Visual Learning*, Krämer (2014) has pointed out that the human sciences have generally focused on a crucial dichotomy between word and image. However, tools for thought do not seem to fit this binary ordering: tables, graphs, diagrams or maps, arise as a “conjunction of language and image,” which is very powerful since it makes “saying” and “showing” work together, thus reaching beyond the word/image binary opposition. Such a conjunction establishes an “operative iconicity”: cognitive artefacts are not only intended as representations (a map represents a city and a Venn diagram represents certain logical relations) but they are also inviting their user to rely on them as instruments to generate and further explore the represented objects of knowledge (we navigate the city through a map and we extract new logical relations by reconfiguring a Venn diagram).

Writing as well can be considered a cognitive artefact.¹ Goody (2000) took the experience of the protagonist of Defoe’s *Robinson Crusoe* as paradigmatic: it is only where he finds pen, ink and paper that he finally begins “keeping things very exact,” most of all by telling the time. In Goody’s view, writing has been a crucial improvement in our cultural evolution, since it has influenced not only the content of our exchanges but their very structure. The drawing of the line has been a graphic accomplishment that has changed forever the way we formulate our thoughts (think for example of the line constituted by the carvings in a stone to track days passing by). Writing and the drawing of conceptual lines are

1 In the following, I will use cognitive artifact as synonym for tool for thought. However, it is true that there might be cases of tools for thought that are not strictly speaking artifacts, for example gestures.

phenomena that cannot be considered from within the word/image dichotomy. Despite this, operative iconicity brings about a form of “cognitive technology” that becomes available for sharing and structuring the content of our thoughts. As Goody suggests, we could think for example of the mathematical table – certainly a product of writing but more interestingly of the drawing of the graphical line – as a tool for thought whose functioning can be taught to and learned also by people who can neither read nor write. The table here is “a technology for the intellect”; in Krämer’s words: it belongs to the class of the “diagrammatic,” overcoming the word/image dichotomy.

In the present paper, I will assume that “operative iconicity” is indeed the characteristic feature of numerous tools for thought and my aim will be to explain the conditions for it. In Section 2, I will introduce my hypothesis about the existence of a human capacity labelled *diagramming*. In Section 3, I will discuss diagramming in relation to the philosophy of mind. In Section 4, I will present some pieces of evidence coming from experimental psychology and philosophy of mathematics supporting the diagramming hypothesis. Finally, in Section 5 I will briefly discuss some open questions.

2. The Hypothesis: Diagramming

In an article in the fourth volume of this series, I introduced my hypothesis about the existence of a capacity that I have labelled *diagramming* (Giardino 2014). Thanks to this capacity, humans are able to recruit a variety of cognitive systems – spatial perception and action systems – that are already available in other contexts, with the specific aim of reducing cognitive loads for memory and assisting problem solving. The human species is endowed with natural capacities for treating spatial information and planning/regulating action in the external world, which have an undisputable survival value. In my view, by connecting the systems responsible for spatial perception and action – and possibly other systems – humans have invented a class of (cognitive) artefacts capable of assisting them in solving new problems originated in the course of their cultural evolution – the nature of which would have made it impossible to address them using one of those systems alone. In particular, according to my hypothesis: (i) the production and the analysis of spatial cognitive artefacts *recruit action systems*; (ii) in some cases, recruiting action systems makes problem solving *easier* (problems are solved more efficiently, more quickly, and with less cognitive efforts); (iii) spatial cognitive artefacts trigger this recruiting and therefore they act as *multi-recruiting systems*.

In line with Krämer, I argue that to give an account of the functioning of cognitive tools it is necessary to go beyond the dichotomy word/image. In fact, spatial

cognitive artefacts are not simply visual tools but *dynamic* devices, allowing for new inferences by being *acted upon*; tools for thought are the medium where space perception and orientation, action planning and regulation and other cognitive systems (e.g. visual and conceptual) operate in coordination in view of a cognitive task. For this reason, they can gain us a unique insight on the functioning of the human mind and on its motives and capacities for cultural innovation.

Imagine performing an action on a geometric figure, such as translating or rotating it. This will bring together various cognitive systems by triggering each of them: in that same action, the conceptual system will recognize the conformity to some invariance; the visuo-spatial system a transformation in time; and the action system a movement or a movement plan (Giardino 2014). The connection among these different perspectives will allow for the performance of the appropriate inference. Thanks to diagramming, the physical properties of a particular representation are interpreted as referring to other elements – abstract as well – which are not directly present in the space of the representation: by manipulating physical properties, it will be in some cases possible to learn something new about the objects or the events which they refer to. The products of the diagramming capacity are “iconic,” that is, conceived to structure the space of the problem. By using the term “iconic,” the reference is to the notion of “icon” as introduced by Peirce. As Peirce suggests, a “diagram-icon” is a tool that allows making inferences because it has been constructed with an *intention* and is *dynamic*: the diagram-icon leads its interpretant to a state of activity that, mingled to curiosity, brings one to *experimentation* (Peirce [c. 1906]). It is an “operative iconicity,” to use Krämer’s term again.

3. The Background: Moderate Embodiment

In the recent philosophical literature, various hypotheses about the nature of our mind have been put forward that are possibly in line with the diagramming hypothesis. For example, Varela et al. (1991) have proposed that the mind is *embodied*, and Clark and Chalmers (1998) that it is *extended*. Despite being very inspiring, the metaphors of the mind as embodied or extended do not seem unfortunately to be enough when it comes to clarifying, *in practice*, how humans were able to create and are able to rely on ‘scaffolding’ structures in order to enhance their reasoning and inferential capacities. I do not take here any particular metaphysical stance about the location of the mind in the environment; more modestly, I claim that cognitive processes do not happen exclusively in the brain but extend themselves beyond the skin and skull of an individual, and therefore cognition happens to be *distributed* between internal and external structures, for

example, in space (see for reference Hutchins 2001). It still remains to evaluate the possible role of the body: how much the experience of having a particular body would matter for the performance of a variety of cognitive tasks?

On this topic, Goldman (2012) has interestingly proposed to assume a *moderate* approach to embodied cognitive science. According to Goldman, empirical studies show that human cognition can in fact be considered for the most part as embodied because information obtained from *proprioception* and *kinesthetics* (which refer in the first place to the perception of the position and of the movements of the different parts of the body), happens to be often reused for other, more abstract tasks. The empirical part of Goldman's claim is that there exist so-called *bodily representational codes*, that is, a subset of mental codes that are primarily or fundamentally applied in forming interoceptive or directive representations of one's own bodily states and activities (see for reference Goldman–Vignemont 2009). The philosophical part of Goldman's claim is that the brain *reuses* or *re-deploys* cognitive processes having different original use to solve new tasks in new contexts; when it comes to bodily representational codes, these appear to be extremely pervasive: selected cognitive tasks might be executed via embodied processes, and there is no need to ascend to more global claims.

Goldman's proposal leads to a "moderate" conception of embodiment-oriented cognitive science precisely because it specifies the role of the body in cognition, first by defining what bodily representational codes are and then by explaining how they happen to have an influence on some cognitive processes. This framework is crucial to consider diagramming as allowing us to perform actions on material spatial artefacts, leading to cognitive advantages in some particular tasks. Such a view runs counter to standard theories in cognitive science, which have claimed that core knowledge representations in cognition are amodal data structures that get processed independently of the brain's modal systems for perception, action and introspection.

4. Some Evidence from Mathematics

4.1 Gestures in Explanation

What if mathematics in particular is (moderately) embodied? As a first piece of evidence in favour of the existence of the diagramming capacity, consider gesture in mathematics. According to standard approaches, mathematics is an abstract science, dealing with abstract objects described by signs not sharing any properties with the ordinary objects we interact with every day. However, some recent studies have questioned the existence of a sharp distinction between abstract knowledge

on the one hand and the concrete world on the other. According to Lakoff and Núñez (2000), abstract mathematical concepts are rooted in *embodied activities*, such as for example our ways of thinking about the world, and how we describe it, that is, our perception. In line with previous studies on language (see for reference Lakoff–Johnson 1980), the authors propose that abstract scientific concepts, as well as ordinary ones, can be reformulated in terms of *metaphors*, which are not mere linguistic phenomena, but crucial elements of thought. Indeed, the typical mathematical jargon contains many terms that allude to our relationship with the real world: natural numbers “grow” indefinitely, points “lay” on a line, functions “move” to zero. The basis of these metaphors is *bodily experience*: mathematics is embodied because we understand and explain it by making appeal to embodied cognitive mechanisms, of which conceptual metaphor is the main one.

Recently, Sinclair and Gol Tabaghi (2010) have interviewed six mathematicians and asked them to explain the meaning of the mathematical concept of “eigenvector”. The interviews were filmed, with the aim of evaluating the mathematicians’ embodied reasoning. The videos show that the mathematicians make use of a variety of representations – speech, gestures, diagrams, and so on – moving from one to the other without difficulties, thus blurring the alleged borders between the mathematical and the physical world. They all well know the formal ‘manual’ definition of eigenvector, single, atemporal and static; nonetheless, without exception, they offer a description of eigenvectors that alludes to a very different interpretation, including also temporal and kinaesthetic elements, as shown both in the terms and in the gestures they use. Metaphors are common: some of the mathematicians focus on the transformations of the vectors, by saying and showing in their gestures how they “shrink” or “turn”; others describe the vectors’ personality, by claiming that they “go in the same direction,” they “align,” and so on. In other words, none of the mathematicians speaks of eigenvectors only in terms of algebraic equalities. Moreover, some metaphors are perceptual (for example, one mathematician thinks of the quadratic function as a “goblet”) but most of them have a movement component. Furthermore, the high variability in their gestures seems to depend on their respective education and competence, i.e. on their relevant background knowledge. Gestures, compared to language, are in some sense the ‘degree zero’ of diagramming: they give more possibilities than simple speech to express continuity, time and movement, thus confirming the intuition of the French mathematician Châtelet (1993), who saw in a mathematical diagram the “crystallization” of a gesture.

4.2 Formulas in Algebra

A second piece of evidence in favour of the existence of diagramming comes from recent experimental work on mathematical notations. Landy and Goldstone (2007) have considered how physical layout affects the segmentation of simple equations. A difficult and yet routine part of mathematical reasoning is to segment a notational form, that is, to parse it into its formal components. For example, in a formula, in the absence of parentheses, multiplication comes before addition, and therefore the equation must be parsed accordingly. Following the standard approaches to mathematical reasoning, the cognitive parser executes segmentation by applying formal rules to individual notational symbols; the assumption is that abstract symbol sequences are trivially extracted from physical notations. To run counter to this assumption, the authors added several visual cues such as spacing, lines or circles to the formulas of an equation and then showed them to their subjects. The hypothesis was that such cues would trigger the application of perceptual grouping mechanisms and as a consequence the capacity for symbolic reasoning. The results showed indeed that the subjects' judgments about the validity of the equations were more likely to be correct if visual groupings were in line with valid operator precedence (multiplication must be executed before addition in the absence of parentheses). This would give evidence to the authors' hypothesis that people use typically available *non-formal* information to make grouping judgments, and only subsequently integrate this information with formal rules, which is in line with diagramming.

4.3 Diagrams in Topology

A third piece of evidence in favour of diagramming comes from my research about visual tools in topology. Several philosophers have discussed the use of diagrams in mathematics (Giardino [forthcoming]): mathematicians often rely on the space of the representations they use in some cases by performing some actions on them. Space is crucial for reasoning: as it is well known, in the 1980s Johnson-Liard (1983) proposed a theory of human reasoning that was based on *mental models*, that is, human reasoning would be a mental simulation process in which models of the premises are constructed, inspected, and validated. However, according to the diagramming hypothesis, spatial cognitive artefacts are multi-recruiting systems, and therefore also the *actions* performed are crucial for reasoning. Kirsh and Maglio (1994) have famously proposed to distinguish between *pragmatic* and *epistemic* actions: actions of the first kind aim to bring the agent closer to his or her physical goal, while actions of the second kind "use [the] world to improve cognition," i.e., they are "physical actions that make

mental computation easier” (Kirsh–Maglio 1994: 513). An epistemic action is performed *outside* on the physical objects that are available, and it is precisely the performance of this action that enhances our inferential capacities. The concept of epistemic action can be extended to the use of signs in mathematics. As De Cruz and De Smedt have recently proposed, mathematical symbols “enable us to perform mathematical operations that we would not be able to do in the mind alone, they are epistemic actions” (De Cruz–De Smedt 2013: 4). Of course, such a view is not epistemologically innocuous, since it assumes that mathematical signs are intimately linked to the concepts they represent and vice versa.

Recently, together with Silvia De Toffoli, we have considered the case of a practice of mathematics where *concrete* manipulations and transformations are performed on the space of the representations: the practice of proof in topology, in particular in knot theory and low dimensional topology (De Toffoli–Giardino 2014; 2015).² In our interpretation, knot diagrams are *dynamic* tools: in perceiving a diagram; one has to see the *possible moves* that can be applied to them. For this reason, experts have developed a specific form of enhanced *manipulative imagination*, which allows them to draw inferences from knot diagrams by imagining, and in some cases actually performing, epistemic actions on them. We argued that the meaning of a knot diagram is not pre-defined before the definition of its context of use: it is only when the mathematicians fix the mathematical space in which the particular diagram is embedded and as a consequence choose which manipulations are allowed that the knot diagram becomes meaningful. This indeterminacy of meaning is precisely the feature that makes knot diagrams a space for experimentation, where different actions and consequently different possible interpretations can be tested. For this reason, knot diagrams are a good notation, because they represent mathematical concepts but at the same time have inferential power: a notation is “good” when it not only facilitates calculation but also prompts new ideas and induces new developments. Also the actual practice of proving in low-dimensional topology involves a kind of reasoning that cannot be reduced to formal statements without a loss of intuition: the representations that are commonly used in low-dimensional topology are *heterogeneous*, i.e. neither entirely propositional nor entirely visual (the word/image dichotomy does not apply).

2 More recently and along the same line of thought, we have analysed the proof of “Alexander’s Theorem,” which allows connecting knots to topological braids (De Toffoli–Giardino 2016).

Manipulative imagination is *shared* by experts: it is the kind of reasoning that one has to master to become a practitioner. Moreover, the manipulations allowed on the representations as well as the representations themselves are epistemologically relevant, since they are integral parts both of the reasoning and of the justification provided: the representations give a *material* form to the transformations (and in this sense they *embody* them), thus allowing experts performing epistemic actions (and in particular drawing inferences) on them. These actions are *controlled* by the shared practice: the set of legitimate transformations is limited and determined by the context. Differently from gestures, diagrams are not idiosyncratic but part of a solid and stable practice.

5. Open Problems

To sum up, according to the diagramming hypothesis, spatial cognitive artefacts act as multi-recruiting systems. Despite not being material, gestures show that spatial and motor elements might help comprehension. Moreover, it has been shown that the way the notation is perceived influences comprehension and that experts in topology are able to envision (physical) transformations on the diagrams having conceptual consequences.

If diagramming really exists, then two questions can be formulated in relation to the general topic of this collection. The first question is for people working in education: would it be better to replace the reference to visual learning with that of (moderately) *embodied* learning? The second question is for the developers: what happens (or maybe what has *already* happened) when diagramming meets the new technologies? For example, should touch screen technologies be designed in accordance to a more serious reflection about the role of space and action in reasoning? This is matter (I hope) of further research.

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Daniel L. Golden

Visual Management of Time

1. The Use of Time

There is a striking contradiction between *time* as one of the most fundamental constituents of human existence, and as one of our most abstract concepts ever. While – as we can learn from inquiries made by Kristóf Nyíri (2006, 2007, 2016) – the sense of time is deeply embedded in our bodily subsistence from heartbeats to motoric gestures, this kinesthetic-biological background cannot give an exhaustive account of time functioning as a social institution. The importance of the latter was realized by several theoreticians of modern society from the early 20th century. According to Georg Simmel (1903), metropolitan life presupposes the precise coordination of actions via the harmonization of clocks. Max Weber (1922) suggested that modern bureaucracy is developing a so-called technocratic thinking through presenting itself as a machine-like entity yielding to ever better efficiency. Lewis Mumford (1934) envisioned the transformation of organic time into mechanical time in order to put social life under control. In general, modernization will make indispensable reliable time calculating systems which can be accessed through uniform ways for the whole community at any point in time.

Considering the long history of time measuring devices we can see that they all make use of certain natural-physical phenomena. However, the sun moving, water or sand flowing, electrons emitting microwaves, etc. are in themselves insufficient to turn time into something calculable. They need to convey their outcomes in a visible (or sometimes audible) way for human comprehension. Most measurement tools apply a kind of *visual translation*, i.e. projecting the passing of the abstract time into the factual space; casting a shadow on a display with a calibration, or installing a hand which will point at a certain section of the visually designed surface. In fact, sundials, clockworks, time lines, calendars and time tables all build upon visual components in order to make the abstraction *conceivable, communicable, and operable* for the human mind. We can even call this the “domestication of natural time,” as we may get the impression that we gain the power even to manipulate it by those artificial means.

2. Time Management and the Concepts of Time

The main driving force behind the requirements on timing, tracking, and synchronizing human activities was, of course, industrialization, together with free competition. In that framework consumption of time had to be optimized in the same way as of any other material resource in order to benefit most from production procedures. Frederick W. Taylor (1911/1967) turned that efficiency issue into a scientific problem, making careful research and meticulous experiments with factory workers standing behind the assembly lines. *Taylorism* became the trademark for the idea that any human activity can be reorganized by identifying the distinct units of it and rationalizing the sequences of their realization.

Since then *time economy* became one of the basic domains for management studies. As we can learn from a popular book on time management (Johns 2003), the very point to start from is the insight that “time isn’t like the Brazilian rain forest: it is irreplaceable”. Time in itself may be endless, “but for each one of us the supply is undoubtedly limited” (Johns 2003: 5). That said, what we shall aim at is to take the control over the amounts of time standing at our disposal. “Manage your time or it will manage you,” we are told.

It is suggested that there are basically two ways of reacting to increasing duties and tasks. Either we simply elongate our working week: going to work early, staying there late, taking work home, and working at weekends, or we start to manage time much more effectively and productively. The proper use of time is interpreted here as “adding value”. Conducive moves will include everything what brings us closer to a meaningful action: planning, exploring, thinking, making decisions; while *wasting time* will mean ‘spending it without added value’, i.e. not being engaged in anything reasonable. Efficiency, then, will be formulated as maximizing the proportion of useful events to the time used. The manager’s task should be no longer fighting against unexpected threats to his or her company, but pursuing as many additional values in a given interval as it is possible.

This also means that time management can be best defined as the ability of managing ourselves in order to produce the maximum activity within a certain period of time. So, arguably, it is about nothing else than “self-management,” the demand for endurance and devotion in working consciously for carefully chosen goals or aims. It will consist of monitoring, evaluating and restructuring our customs in time usage to improve inefficiencies. While managing *public time* served for the coordination among actions of different members of a society, here we are facing the claim for something similar, but on the individual’s level, where distinct activities shall find their optimal order in a personal time frame. This would produce something like a *private time*, which seems to make an important shift in

perspectives. Going one step further, we can say that the chasing of a competitive advantage in using time may change the concept of it from the “objective” to the “subjective”. It almost seems to have a dual nature: either we can think about it as something built of rigid and unchangeable units, or we may think that there are certain holes in it which can be fulfilled by additional contents.

At this point it seems to be advisable to take a look at the presuppositions about the nature of time behind time management. A first question is whether we shall think about time as linear or cyclical? Shall we say with Heraclitus that “one can never step into the same river;” i.e. the flow of time is unstoppable and it stands above any human intervention, or rather share the idea revived from its ancient roots by Nietzsche about the “eternal recurrence,” telling us that within the infinite realm of time the same patterns will be necessary repeated again and again.

Probably to get time manageable, we have to assign to both of these aspects. Any planning for the future based on records of the past will have sense only if we think that certain situations will somehow return. But we should also believe that events are not determined forever, so that we will be in the position of making some improvements.

Another question is in what sense we shall take time as a constituent of our world? Newton’s *absolute* time, for instance, is linear, completely homogeneous and linked to mechanical movements, so that it can be split up into measurable units. It is a natural phenomenon entirely inhuman as it obeys natural laws independently of human efforts made for measuring it. This *mathematical-physical* concept of time can be contested by *psychological* approaches. Bergson, for instance, contrasted this scientific notion of time with a metaphysical one called *real duration*. The latter cannot be split up mechanically into smaller parts as the former, and it can be experienced only through the meaningful actions of the individual. It will be more about quality than quantity, as “[...] the positive time manager will say: It isn’t the hours you put in, it’s what you put into the hours which determines whether you’re effective or not” (Johns 2003: 16).

We can make our understanding even more complex if we consider the *relativistic* challenge presented by Einstein, where activities with different intensity would make differences in the flow of time, thus resulting in incommensurable durations, relative to the personal frame of reference of the observer. On the other hand, from the perspective of Heidegger’s existential analysis, authenticity of life depends on the proper use of our time. Against the ordinary concept of linear and infinite time going back to Aristotle, he insists, time is definitely finite, and we shall live our lives having that in mind, grasping all opportunities for giving significance to it. While the lifespan of the human being cannot be stretched over

its biological or medical limits, at the same time it can be seemingly infinitely widened inwards by acquiring more and more sense for it.

3. Visualizing Tools and Understanding Time

Management issues linked to the better use of our temporal resources are generally about the *improper occurrence* of certain events – too many distractions in the forms of incoming phone calls or face-to-face interruptions, too little delegation of time consuming tasks to subordinates, etc. The results of these are massive overloads of work in a given period. To avoid that, the good manager will make plans as to how to use his or her time more effectively. Data can be examined from different angles: *value-added analysis* opposes maintenance and crisis prevention to performance improvement and changing management; *task-scale analysis* investigates whose expectations are coming to fruition, so that there are boss-imposed, system-imposed, subordinate-imposed, customer-imposed, and self-imposed uses of time; finally *time-scale analysis* makes distinctions among specific purposes such as administration time, communication time, operations time, supervision time, wasted time, and executive time. Based on those successful time management schemes, they must include a realistic *estimating* of the time necessary for a certain activity, while *progress reports* give feedback on how much the initial idea measured up to the time units actually utilized. The worst thing to be experienced in this respect is *time-pressure*, when the planned activity won't fit into the timeframe opened for it. In other words, there is a clash between our personal commitment to accomplishing a task and the impersonal flow of time.

All these, once again, are presented through various visual-spatial depictions. For example, a deadline signed in a calendar gives the impression of a finite spatial area which should be filled densely with purposeful actions. By visualizing, we construct a *common, external understanding* on the top of our *personal, internal experiences* of time. We shall note here that the whole procedure seems to be highly conventional, since an abstract concept is represented by symbolic visuals, which will gain their concrete meaning only from usage, i.e. the manipulation of time made possible precisely by them. The visualization of time relations is actually built up in three steps. The first one is spatial metaphorization, the second is visualization of the spatial metaphor, which means the transformation of the abstract temporal relations into factual spatial relations. The third step already consists of the actions realized following the morals drawn from previous records: filling up empty spaces, reducing density, changing sequential order, etc.

One of the most common tools is the daily *time schedule* in a form of a clock, where each hour is dedicated to a distinct activity (W1). *Time tables* are also

widespread for the same reasons: they show life put into logical order, under conscious control. Even the *timeline* can be regarded as a sequence of events with time stamps presenting how much one succeeded in managing his or her life time (W2). An unusual tool is the *chronodex*, or *hyperdex*, or *spiraldex* (W3), which gives the possibility of managing multitask-work by coloring time periods used for distinct activities.

Besides these *static* representations, recent ICT developments put some *dynamic* ones into everyday use as well. By utilizing the possibilities of moving picture these are able to give the feeling of time passing as well. Think of the *sidebar* showing our actual position within the consumption of a certain media piece, or the *download status bar* transmitting the information about the state of perfection of the process going on. Both are making an effect on our sense of time by linking spatial proportions to temporal distributions in a dynamic way.

Based on these insights a theoretical framework for the visual interpretation of time can be designed where the key terms will be *proportion*, *resolution*, and *segmentation*.

We may find it quite embarrassing to hear that the secret of time management would be simply to “use all seconds in the day wisely”. It is because we feel that the deliberate allocation of meaningful actions at this scaling is beyond the abilities of human beings. Instead, we will find different units of time and certain amounts of them proper for our diverse activities. We will want to count the time necessary for learning for the next school day in hours, preparing for an important exam in months, and the period of our lives dedicated to education in years. These measuring units of time are partly universal and objective, but in a sense also relative to the action in question. *Resolution* then would mean here, that one can actually zoom in and out over the images of time, so that you will receive different slices of its flow with different depths or perspectives. Management goals will be formulated in terms of *proportions* – which is a visually based concept coming from geometry – as e.g. “reduce the time spent on telephone calls by half”. Increasing efficiency will be executed through the redistribution of a timespan between useful and “unuseful” activities. While resolution defines the units, *segmentation* will give the scope or range of them to be seen together creating a temporal narrative, bringing into relief a certain amount of units that seem to be somehow linked together to form a meaningful section. Those will be the histories of a person, a family, or a nation.

A unique example for that understanding of time would be the data visualization made by Lev Manovich and Jeremy Douglass (W4) from all 4535 issues of *Time* magazine published between 1923 and summer 2009. The unit in this

representation without any surprise will be the week, while different periods of 20th century history can be identified by temporal patterns of different styles, printing techniques and other visuals of the front cover images.

4. Conclusions

Dare we say then that, at least in the context of human comprehension, time has a definitely *visual nature*?

Philosophical considerations behind time management seem to give the possibility of actually reconciling and somehow making use of all contradictory ideas concerning the features and functionalities of time. Visual representations seem not only linking together conceptually the physical and psychical understandings of it, but also merging them, giving the possibility to transform the abstract notion into something like a material resource consisting of practically controllable working units which can be reorganized at one's will.

The visual-spatial external representations of our internal time experiences serve for mitigating, or civilizing the natural phenomenon. Throughout the centuries, dozens and hundreds of smart tools has been developed and constructed in order to give the possibility to seemingly manipulate time. In the place of the hardly conceivable flow of time, we put graphical symbolization of punctual and durational aspects, which can be easily perceived by the eye and the mind.

In that way we end up with a notion of time linked to the presence of meaningful actions, which can give us the hope for utilizing the theoretic phenomenon pragmatically in the scope of our everyday life.

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W1 = <http://www.whudat.de/from-mozart-to-dickens-how-historys-greatest-thinkers-managed-their-time-14-pictures/>.

W2 = <http://www.vertex42.com/ExcelArticles/create-a-timeline.html>.

W3 = <http://jessversteeg.ca/2015/03/17/chronodex/>.

W4 = https://www.youtube.com/watch?v=d_OceOpCmf8.

Javier E. Carreño

Husserl on the Right Timing of Depictions

1. *Chronos* and *Kairos*

The founder of phenomenology, Edmund Husserl, might not come to mind amongst the foremost thinkers who are sensitive to the history and methods of rhetoric. And yet, at the crossroads of the phenomenological analyses of image-consciousness, time-consciousness, and aesthetic consciousness, one may be pleasantly surprised to find Husserl grappling with a basic rhetorical problem pertaining to so-called ‘static’ images (such as representational paintings and busts in the manner of Albertian silhouettes) (Biceaga 2010: 83): how can such images, apparently ‘without a time’, strike us as having a ‘right’ timing?

The claim that images are without time has had to reckon that there are manifold concrete ways in which plastic static images convey temporality to us. It is no accident, for example, that a photograph would present a *past* time; or that an impressionistic painting could convey movement; or that a sculpture could represent an event. Plastic images often reflect a temporality – be it real and historical, or else imaginary – which can be unfolded through acts of pure phantasy.¹ However, images convey a “perfect timing” or *kairos* whenever the tension between a depicted time-phase and the possible phantasy continuations is won over by the depicted time-phase on account of the maximal awareness it affords of its subject. While the *chronos* of an image makes the depicted time-phase simply a part of a greater whole, an image with a *kairos* gives the depicted time-phase as

1 English translations of Husserl (in the *Edmund Husserl Collected Works*) have opted to render Husserl’s *Phantasie* into English as “phantasy,” amongst others to avoid two shortcomings with the English alternatives of “imagination” and “fantasy.” “Imagination” irremediably links *Phantasie* with the having of “mental images” even though Husserl, as early as the *Logische Untersuchungen*, criticizes any and all psychologistic “picture theories” of consciousness (Husserl 2001: 125–127). “Fantasy” in turn triggers associations connected with the literary genre and with the imagining of objects with which we are not readily familiar as proximately actual or historical, while I can and often do phantasy with objects corresponding to those of a really possible perception (Husserl 2005: 2). While some commentators do translate *Phantasie* as “imagination” (Drummond 2008: 106), Husserl’s own preference for “phantasy” would appear to be clear from his own entry to the term “fantasie” in André Lalandé’s *Vocabulaire technique et critique de la philosophie* (Lalandé 1988: 342).

a “whole,” greater than (or at least preferable to) any of its imaginary temporal continuations (Rodrigo 2009: 180). As I will show, Husserl thus overcomes the binary categories of “static” and “proto-cinematic,” which otherwise polarize the study of the temporality of plastic images (cf. Claass 2014: 10).

Several items will need to be addressed shortly, beginning with the peculiar way Husserl’s phenomenology understands images as representations of an “absent” time. Next, we will address how our awareness of time in images is different from our perception of time, before we come to terms with how an image might communicate not just a time, but in fact a “right timing”.

2. The Consciousness of an Image ‘Now’

In the order of things, let us begin with how Husserl understands static images as presenting something temporal in the first place. For a phenomenologist, whenever we confront an image, we are not just aware of a thing that happens to resemble another, since things may perfectly resemble something, and yet not serve as images. Rather, when dealing with images, we are necessarily aware “at once” of more than one object. When beholding a portrait, we are aware of 1) a ‘subject’ or ‘motif,’ that appears in 2) the framed image that renders it. Together with Husserl we call the first the “image subject,” and the second the “image object”.

Portraits, then, entail a double objectivity. But since they appear on the basis of the sensuous surface of physical things, the phenomenologist further distinguishes between the “image object” and the 3) “physical image thing,” such as the paint-stained poplar panel (Husserl 2005: 30).

For the phenomenologist, this threefold distinction on the side of images (comprising elements as disparate as the “real” canvas and the “phantasied” image subject) would be altogether impossible without the involvement of a primitive form of conscious intentionality called “image-consciousness.” How image-consciousness differs from positing perception is seen in the fact that one who perceives either posits or seeks to posit the existence of what he perceives, whereas whoever beholds an image is not inclined to take the “image subject” as something actually existing before oneself. From the standpoint of normal perception, the image, then, is a sort of “nullity” or illusion (“*Schein*”). Image-consciousness, however, contrasts with pure phantasy in that the “image subject” is intended mediately, i.e., *in* and *through* an image object – and yet not ‘emptily,’ as it might be the case with signitive intentions.

For Husserl, the realization that all depictions are, in a sense, “illusory,” raises the important question of why and how images do not trick us. From the side of consciousness, image-consciousness connects at once a ‘perception’ (*Perzeption*)

of the image object with a ‘phantasy’ of the image subject. The involvement of phantasy here means, amongst other things, that no matter how “ready-made” an image may strike us, all images require the viewer’s willful, conscious, and imaginative involvement. And from the side of the “image,” Husserl realizes that depictions do not aim to pass for something actually perceived, as images offer an approximate rather than a perfect resemblance of their subjects.

Moreover, image appearances are discontinuous with their perceptual surroundings since what appears in the image does not presently exist within the frame space. It is in this regard that Husserl describes the image as “the appearance of a not now *in the now*” (Husserl 2005: 47). The image appears in the midst of the field of perception, in the midst of all that is now present – but what appears in an image cannot be intended as something actually present. In contrast with its perceptual surroundings, the image is really a “nothing,” although this awareness of an image’s perceptual nullity does not prevent our regular dealings with images. On the contrary, when beholding Mona Lisa, we never quite perceive her as present, and she continues to appear *in absentia*. Thus, image-consciousness implicates a doubling of time, in the sense that what appears in the image is necessarily intended as belonging to a different temporal nexus from that of things that appear perceptually: “this exhibited something can never exhibit the now with which it conflicts; hence, it can only exhibit something else, something not present” (Husserl 2005: 47).

3. The Temporal Halo of an Image Now

At first blush, it would appear that Husserl draws an untenable conclusion with regards to images. Why would anybody call the appearing “not-now” in images something temporal? Is not temporality here precisely what is being denied? But for Husserl, a perceptual awareness of an abstract now-point is altogether impossible. Husserl’s consideration of the temporality of images, then, coheres with a basic premise regarding our awareness of time.

True to a time honored philosophical tradition, Husserl never defines temporality. He goes as far as to say that we even lack the right words to speak about time. But just as Husserl addresses image objectivities by analyzing their corresponding intentionality, so does he also address temporal appearance by analyzing the consciousness to which duration and succession appear. To be sure, what falls under the purview of time-consciousness is not real or transcendent time, but the time of appearing. And this immanent appearing time “cannot be measured; there is no clock and no other chronometer for it. Here one can only say: now, before, and further before, changing or not changing in the duration, etc.” (Husserl 1991: 339).

For the phenomenologist, the temporal awareness of something ‘now’ or ‘present’ (something purely temporal or else spatial-temporal) is always already three-fold in character. We are aware of an object as present because we experience it (a) in one of its phases as ‘now’, (b) in one or more of its phases as ‘just-having-been now’, and (c) still in other forthcoming phases as ‘not-yet-now’. But to be aware of anything temporal does not mean that consciousness has to constantly perform a trio of distinct temporal presentations, as if our awareness of time had to piece itself together. On the contrary, Husserl discovers that consciousness *always already* manifests a temporal structuring, from “the boot, up,” so to speak: we are internally and originally aware of the ‘now phase’ of consciousness in “primordial impression” or “primordial sensation”; of the elapsed phases, in “retentions,” and of the forthcoming phases in “protentions”.

Because of the three-fold structure of perceptual time-consciousness, we can never sensibly experience an object in a now-phase without being conscious of it in those phases that are strictly “not now”. For the ‘now’ is irremediably “a relative concept and refers to a ‘past,’ just as ‘past’ refers to the ‘now’” (Husserl 1991: 68). The same holds in principle for an “image now,” even if it is also a perceptual “not now”. As Brough puts it, the depicted now-moment “cannot be snatched cleanly from its context with all of its temporal references scrubbed away” (Brough 2000: 236).

Still, the formal necessity of characterizing the “image now” as temporal does not yet answer the question of how a depictive image acquires a ‘halo’ of past and future temporal phases. Whichever way one considers this problem, it does not appear to be the case that one can simply complete the “imaged now” by intuitively phantasizing a temporal halo for it. For by phantasizing, the Mona Lisa into phases, in addition to the imaged Mona Lisa ‘now’, one still does not experience a continuous flow. When looking at the Mona Lisa, the only phase that ‘appears’ is the same Mona Lisa phase time and again: it never flows into retention as a no-longer ‘now’ phase. As Husserl remarks, “the modes of appearance are firmly shut off, no matter how they may run over into continuations by means of phantasy” (Husserl 2005: 537). Moreover, and unlike the perceptual awareness of time, there is no determinacy of earlier or later Mona Lisa phases: whether she appears the moment her smile no longer broadens, or whether she appears right before her smile broadens, cannot in principle be decided. And even if one were to say that the depicted ‘now’ “always already” represents temporality; however emptily, the problem remains that the time-phase of the image subject “is ‘presented’ as detached, and does not abide in time, and is not really an enduring phase” (Husserl 2005: 537).

One conclusion to be drawn here is that the formal determinations of image-consciousness and of time-consciousness which made it necessary to speak of an image temporality do not yet suffice to grasp it. For what these formal determinations emphasize is precisely the fact that the temporality of images does not compare to any perceived or purely phantasied duration. If there is time in images, it is certainly not a linear or sequential reconstruction of perceptual time. Thus, when Husserl says that “in the ordinary static image, which depicts by means of an unchanging *image object*, a movement might appear” (Husserl 2005: 489), it is clear that the latter apparition does not happen by an imposition of intuitive phantasy.

And yet, could one not claim that it is in this transition or passageway between phenomena and the possibility to phantasy along that an image time opens up to us – as a duration that cannot flow in a succession of phases, but cascades from image into phantasy daydreaming? Is this not what we mean by “almost seeing what is about to happen” or almost “seeing what comes from happening” without losing sight of the image now? Is it not precisely in the contracting interstice between a perennial ‘now’ and an evanescent phantasy temporality that we begin to suspect ‘time’ on the side of the image since the image, as it were, has begun to re-organize my awareness of its time?

4. Aesthetics of Kairos and Nonintuitive Phantasy

In the final part of this paper, I would like to propose that the awareness of the “right timing” of an image is a temporal awareness that an image triggers by intensifying the awareness of the depicted subject in a particular time-phase. And Husserl understands this particular intensification of the awareness of the object in a singular phase takes place, amongst others, in the context of aesthetic experience.

Husserl’s comments on aesthetics are on the whole deeply influenced by the Kantian thesis of the disinterestedness of the judgment of taste (Husserl 2005: 145). And Husserl takes up this aesthetic disinterestedness in any case as a matter of abandoning the existential, natural attitude, so as to become attentive to aesthetic forms (Husserl 2004: 134). Whenever depictions are involved in aesthetic experience, however, we derive pleasure not only from *how* the image object renders the image subject, but also from *how* we become aware of the image subject as a depicted objectivity (Husserl 2005: 390). Concretely speaking, when I contemplate an artistic depiction I am moved, on one level, by a “maximum stock of sensuous moments and their particular combination” (Husserl 2005: 145). On another level, I am moved by “the clear awakening of the consciousness of the object” (Husserl 2005: 145). This consciousness of the depicted subject, even if

not positing its existence, nonetheless co-excites to a degree the awareness of an object's function or purpose.

It is safe to say that for Husserl, an image's aesthetic satisfaction is more a matter of *expressing* than of *impressing*, and that aesthetic pleasure increases the more clearly recognizable the image subject appears – e.g., in a characteristic position – and the more keenly aware one is of what is happening to the depicted subject in the image world. In the example of looking at an ancient sculpture of an athlete, Husserl is struck by how nothing appears to be random or indifferent: “every nerve, every muscle” seems “attuned to action” (Husserl 2005: 146). We become aware not just of a thing, but more importantly, of the momentary tension between its “doing and suffering”. And “[t]hat,” says Husserl, “would be a beautiful aesthetic object: A pugilist or discus thrower who simultaneously has a stomachache” (Husserl 2005: 146).

So at first blush Husserl seems to merely suggest that from out of a possible series of objective temporal and spatial phases, the artist selects the one that is ostensibly most expressive. The viewer, in turn, contemplates the image in the awareness of its maximal expressiveness compared to other perceived or freely imagined objective phases. This contemplation of a subject in the manner of its representation is not, per se, an accomplishment of intuitive phantasy.

But Husserl's own aesthetic contemplation of the pugilist, and particularly of the athlete's unapparent inner struggles, rather reveals a deep imaginative engagement with the image world other than by phantasy continuations. It is clear that the viewer who experiences such things before the image has entered into a fictionalizing attitude that attentively responds to what is portrayed.² When the observer takes on this phantasy “fictionalizing attitude,” the appropriate timing of an image can dawn upon her as a temporalizing experience. And in the case of a “perfect timing of images,” the viewer will be drawn towards the “image now” phase in its completeness to a degree that can even disengage further phantasy continuations.

Allow me to make clear the meaning of my previous statement by referring to Sigmund Freud's famous commentary on Michelangelo's *Moses*. As it is well known, Freud disagrees with commentators who take the Moses as appearing either at a moment of great anger or “on the point of leaping up from its seat and rushing away to create a disturbance”(Freud 1997: 220). Freud comments that

2 As Husserl remarks, “art is the realm of phantasy that has been given form, of intuitive phantasy, but also, in part, of non-intuitive [unanschaulicher] phantasy” (Husserl 2005: 514). On non-intuitive perceptual phantasy see Carreño (2013).

at some point this, too, was his expectation, but he was disillusioned by the fact that in repeatedly visiting the statue of Moses at San Pietro in Vincoli, in Rome, he never had the impression that Moses was about to break into movement: “this Moses would remain sitting like this in his wrath forever” (Freud 1997: 221). The sculpture seemed to convey no particular movement or duration. But when Freud focuses on the way that the right hand of the Moses holds a lock of the beard, suggesting a retreating motion, he then completes “in imagination [...] the scene of which this movement, established by the evidence of the beard, is a part” (Freud 1997: 224). More precisely, Freud takes the Moses to appear at the *end* of the movement and point of completion: “what we see before us is not the inception of a violent action but the remains of a movement that has already taken place” (Freud 1997: 229).

Regardless of whether Freud’s interpretation is persuasive, it seems to me to illustrate how the “right timing” of a depictive image operates. Clearly, Michaelangelo’s Moses conveys a potent and vivid awareness of the subject in his doing and suffering. But one might fail to see the volume and point of expressiveness altogether by simply and intuitively fantasizing subsequent Moses phases. Having entered into the appropriate “fictionalizing attitude,” the viewer might experience his temporal awareness of the image time undergoing a subtle re-organization, e.g., seeing the Moses in a now-phase as the culmination (and not as a beginning) of an event in phantasy time. That other temporal reorganizations are possible is already clear from Husserl’s own example of the pugilist appearing like *in media res*. But the fact that some temporal re-organizations are more suitable than others is a matter settled by how the subject is rendered in the image now – and this is the difference that having a *kairos* ultimately makes. An image with a *kairos* gives what it represents as the *fruit* of a temporal unfolding to a subject that receives it as the *seed* of a unique aesthetic temporality unfolding in her.

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