Cristiano Vidali
On the Margins of Consciousness
Sketches for a Phenomenology of Digitized Attention

Introduction

At present, there are many studies that face from several viewpoints how attention is affected by the digital. Quite predictably, many of them have certified that the regular use of digital devices is linked to a proportional increase in inattention, both episodic and structural. For example, different investigations have confirmed that receiving notifications – whether they are acoustic (such as ringtones or alarms) or tactile (like vibration) – effectively affects attention, regardless of the subject's actual use of the device (Stothart, Mitchum, Yehnert 2015; Levy, Rafaeli, Ariel 2016).

Other studies have examined the spread of the phenomenon called "media multitasking", that is, a person's consumption of more than one item or stream of digital contents at the same time: during media multitasking, the repeated switch from one target to another engenders a continuous dispersion of attention, corresponding to what psychologists have defined as "switch costs" (Ralph, Thomson, Cheyne, Smilek 2013).

In addition, it has been found out that regular digital media users are subject to stronger endogenous distraction (e.g., recurrent mind-wandering or difficulty in concentrating), even caused by the mere presence of a device in the surroundings (Thornton, Faires, Robbins, Rollins 2014; Ward, Duke, Gneezy, Bos 2017).

1. Two pivotal studies on digitized attention

Although methodologically and thematically differentiated, the various studies just mentioned share a basic aspect, namely, they all deal with attention with what we could define a *quantitative* approach. In other words, whenever an experiment is carried out to investigate how attention is conditioned by a stable use of digital devices, the results are regularly understood in terms of an "increase" or "decrease" in it.

Luckily enough, in addition to these analyses, other authors addressed

the problem of digitized attention in a different perspective, that is, by interpreting it as an irreducibly *qualitative* transformation. This is what two pivotal studies (Ophir, Nass, Wagner 2009; Cain, Mitroff 2011) – which are still a shared point of reference even after a decade – have tried to do, providing interesting clues about a *different way of paying attention* in assiduous media users.

1.1. Cognitive control in media multitaskers

The first study that we are going to deal with was carried out by Ophir, Nass and Wagner, who started by drafting the "Media Multitasking Index" (MMI), a scale – which has been widely employed in following research – whose main function is to create an overall but methodologically founded subdivision between assiduous and episodic users of digital devices. The MMI assesses a range of different media multitasking combinations, thus providing an account of the overall level of multitasking during the usage time of digital devices: more particularly, its scores – obtained through a questionnaire provided to the participants – are calculated as the weighted sum of the number of media consumed simultaneously, divided by the total hours of consumption of each device. Thus, the MMI highlights the relative level of multitasking during time spent consuming media[1]. On this basis, the subjects evaluated through the MMI were consequently distinguished between "Heavy Media Multitaskers" (HMMs) and "Light Media Multitaskers" (LMMs).

Ophir, Nass and Wagner's ultimate goal in their study was to investigate if and how HMMs process information differently than LMMs do, or – to be more precise – whether or not they present any difference under the aspect of "cognitive control", defined as "the allocation of attention to environmental stimuli and their entry into working memory, the holding and manipulation of stimulus and task set representations in working memory, and the control of responses to stimuli and tasks" (Ophir, Nass, Wagner 2009, p. 15583). In order to test such a differ-

---

[1] As it has been noticed (Baumgartner, Lemmens, Weeda, Huizinga 2017), the MMI has several disadvantages, for example it turns out to be poor in detecting the influence of digital devices referred to the *age* of the participants, as well as in pointing out more detailed differentiations within the single categories. Anyway, the importance of such a scale lies in enabling us to frame an overall difference between assiduous and non-assiduous media users, whereas other studies that do not rely upon the MMI assess either very specific multitasking combinations or directly avoid to deal with the influence of digital devices related to the habit of multitasking. Indeed, the systematic feature of the MMI reflects Ophir, Nass and Wagner's intent to grasp multitasking "as a trait, not simply a state" (Ophir, Nass, Wagner 2009, p. 15583), that is, as a subjective inclination spreading along time and not as a merely isolated action.

ence, the authors built their first[2] and main experiment, consisting in a visual short-term working-memory task of filtering ability: here, the participants viewed two consecutive exposures of an array of red and blue rectangles on a black screen; then, they had to indicate by pressing a button whether or not red targets had changed orientation from the first exposure to the second, while ignoring distracting blue rectangles.

As a result of the test, HMMs' performance was linearly affected in a negative way by distractors, whereas LMMs were unaffected by them, suggesting that LMMs may have a stronger ability to successfully filter out irrelevant stimuli[3]. Hence, the authors concluded that "individuals who frequently use multiple media approach fundamental information processing activities differently than do those who consume multiple media streams much less frequently"; more precisely, "HMMs have greater difficulty filtering out irrelevant stimuli from their environment […], they are less likely to ignore irrelevant representations in memory […], and they are less effective in suppressing the activation of irrelevant task sets" (Ophir, Nass, Wagner 2009: 15585).

1.2. Distractor filtering in media multitaskers

There is a second influential article, written by Cain and Mitroff, which is meaningful to us, for it specifically focuses on the impact of digital devices on attention, whereas "cognitive control" examined by Ophir, Nass and Wagner also involved working memory and other executive functions. Indeed, Cain and Mitroff began their study with a direct reference to Ophir, Nass and Wagner's one, highlighting that, even if HMMs did show a deficit in filtering information, it cannot be stated for sure if the deficit arose at encoding, maintaining or retrieving it (Cain, Mitroff 2011, p. 1183).

For this reason, Cain and Mitroff sought to design their experiment in order to evaluate the difference between HMMs and LMMs by limiting as much as possible the interference of other cognitive factors and trying to focus on attention alone. They therefore isolated attentional processes by employing a singleton distractor task with low working-memory demands (the "additional singleton paradigm"), wondering if HMMs' performance would prove to be deficient in this case as well. Here, the participants viewed consecutive exposures of an array of geometric fig-

---

[2] The authors also conducted a second experiment, which we will not take into account, for it dealt more specifically with working memory and not with attention.
[3] For our specific purposes in this paper, we will not dwell on the correctness of the individual measures or on the statistical analyses adopted by the authors to the point of assuming such conclusions. Rather, we will restrict ourselves to reporting their interpretation of the experimental results in general terms, focusing on the theoretical statements they believe they can make.

ures on a black screen: every display presented only one circle target and between 3 and 11 square distractors, each of them containing either a "+" or a "=" symbol. On half the trials, all figures were green, whereas on the other half one singleton was red. The experiment consisted of two task conditions, presented in separate blocks: in the first one (the "never condition"), participants were correctly instructed that the red singleton would never be the target circle, while in the second block they were again rightly told that the red singleton would sometimes be the target circle, just as likely as any other shape. Then, participants were asked to report which symbol occurred inside the circle by pressing a corresponding button. Unlike the previous experiment, where a comparison between two consecutive exposures was required, here the target was related to a choice to be made toward a present and lasting screen (3000 milliseconds or until a response was given), so that working memory was not involved.

In the fulfilment of the task, LMMs were able to use top-down information to improve their performance, focusing only on the requested items, independently of the variations of the others, whereas HMMs equally attended to and processed the red and square singletons, even if they were irrelevant to the goal of the experiment. As Cain and Mitroff concluded, this reaffirmed difference in performance in a filtering task may lead to argue that HMMs maintain a wider attentional scope than LMMs, regardless of the available instructions. In short, such results "suggest that HMMs may have broader attentional filters than LMMs – a bias toward taking in more of the available visual information – which could impact both their laboratory performance and their daily lives" (Cain, Mitroff 2011, p. 1190).

2. What concept of attention? A look at psychology

The two studies we have been rapidly coping with are widely esteemed in today's debate by virtue of their intriguing results. Naturally, being empirical studies, they first of all care about the reliability of the experimental procedures they adopt, just as about the potential findings to which they can lead, while more theoretical issues are only secondarily considered. Yet, if one had to ask what concept of attention – something which is not at all unanimously accepted – the authors had in mind, he would find very scarce argumentation in such articles. Indeed, neither Ophir, Nass and Wagner nor Cain and Mitroff spend too many words to explain what they specifically conceive as attention and, even by looking at their references, we can only find a couple of papers on this matter, which anyway do not seek to provide a systematic account of attention.

Actually, what is far more revealing of how the authors tend to conceive attention are the words they use throughout their papers when referring to it. By taking a closer look under this aspect, terms like "filter", "allocation", "streams of information" or expressions like "selecting/processing environmental stimuli" encourage us with good enough reasons to say that the authors rely upon a notion of attention distinguished by two main features at least, that is, attention conceived 1) as a *resource*, and/or 2) as a mean of *focusing*.

In truth, these two ideas are not new at all: in fact, they refer to some of the most classical suggestions in the history of psychology of attention. The first one plainly relates to a thread which dates back to Donald Broadbent and leads up to Daniel Kahneman's theories, suggesting to broadly understand attention as a *limited resource* ("capacity theory"). In this perspective, attention should be considered as a scarce resource available for a subject, which has to be allocated in order to process only few streams of information coming from the surroundings while neglecting the others (Broadbent 1958; Kahneman 1973). On the other hand, the idea of attention as a mean of focusing leads back to an author who is generally considered the ancestor of the psychology of attention, William James. In particular, he introduced the idea of attention as a "spotlight", a mental beam lightening and focusing on some items to the disadvantage of the others[4]. In his own words:

> Everyone knows what attention is. It is the taking possession by the mind, in clear and vivid form, of one out of what seem several simultaneously possible objects or trains of thought. Focalization, concentration, of consciousness are of its essence. It implies withdrawal from some things in order to deal effectively with others (James 1890, 1983 edition, pp. 381-382).

Similar ideas are widespread among contemporary psychologists of attention. Nonetheless, they are far from being without criticisms, some of which come from authors belonging to the *phenomenological* tradition.

3. A radical shift: the phenomenological perspective

In a way, it would not be entirely correct to speak of phenomenological "objections" to psychology, since to criticize a position somehow presupposes the sharing of common premises, with respect to which certain conclusions are considered undue. On the contrary, psychology and phe-

---

[4] It should be noted that both theses share a – correct, but partial – more general intuition of attention as *selection*.

nomenology – as Edmund Husserl himself repeatedly struggled to highlight – work on utterly different levels, since the former is an empirical science, while the latter aspires to be an irreducibly transcendental one.

However, in our opinion, such a difference – which *must* be consciously pointed out and preserved as such – should not lead one to conclude too hastily that between empirical sciences and phenomenology there cannot in principle be any kind of interaction[5]. Although it would not be legitimate at all to treat the results of psychology and those of phenomenology as directly commensurable, it is nevertheless possible to identify specific aspects under whose they can virtuously interact.

As regards the possible methodological contribution of phenomenology to psychology, let us sketch in an extremely succinct way (therefore, without claiming at all to be exhaustive) at least two characteristics which are at the same time indispensable to correctly understand phenomenology in a broad sense and which can – we think – successfully be employed in a critical comparison with psychological findings.

The former point that we want to strongly highlight is that the first and main aim of phenomenology does not consist in describing particular, individual phenomena, but rather in *making the structures both of subjective acts and of their corresponding realms of objects explicit* – in other words, it consists in detecting the *conditions of possibility* of a phenomenon in any possible experience of it[6].

The second aspect, already remarked in Husserl's *Logical Investigations* (Hua XVIII, p. 193), is that any result, to be considered as such, must be traceable to *evidence* [*Evidenz*] and must relate to it as ultimate criterion of validity. In this perspective, empirical or quantitative data may reveal possible connections between apparently unrelated phenomena, but *they do not autonomously represent a definitive proof or argument in themselves.* This remark on the appeal of phenomenology to evidence must not be interpreted as a claim in favour of introspection or as the dominance of subjectivity over objectivity, since the structures that phenomenology intends to highlight are in no sense subjective (namely, private and idiosyncratic), but *objective*, that is, re-identifiable as such by any transcendental subject.

---

[5] Countless attempts to ease this interaction have been made, for example by accurately explaining some methodological resources of phenomenology (Schmicking 2010) or by at least trying to outline its possible implementation in an experimental setting (Gallagher 2003), just to name a couple.

[6] To affirm that phenomenology consists in bringing to light differences in structure means that it has nothing to do with introspection – as, instead, several critical interpreters (Dennett 1991; Metzinger 2003) tend to erroneously understand it – since the very distinction between internal and external objects is in principle rejected.

4. Phenomenology and the question of attention

Coming back to our main topic, what are then the contributions of phenomenology on attention? In truth, this specific issue has always been quite an odd question for phenomenology[7]: Husserl concentrates on it in the third chapter of the *Second Logical Investigation*, he spent an entire course on the problem of attention in 1904-05 ("*Wahrnehmung und Aufmerksamkeit*", Hua XXXVIII), and dedicated very meaningful paragraphs to it in *Ideen I* (Hua III/1, pp. 211-215); he then came back to this point in *First Philosophy* (Hua VIII, pp. 98-106), in the *Analyses Concerning Passive Syntheses* (Hua XI, pp. 148-172), and again in Landgrebe's version of *Experience and Judgment* (Husserl 1939, pp. 79-91). Moreover, the topic of attention was also addressed by Merleau-Ponty (1981, pp. 26-51), as well as by Aron Gurwitsch (see Gurwitsch 2009b, chap. 10).

Despite not being a usual subject, several contemporary authors have reconsidered the status of attention for phenomenology. Among them, the most important contributions of the last decades surely come from Natalie Depraz (2004; 2014) and Paul Sven Arvidson (1996; 2006), who repeatedly engaged in a critical dialogue with cognitive sciences. For our present purposes, which do not aim to outline an overall account of attention in a phenomenological perspective, we will only examine some of Arvidson's analyses, thereby critically considering in a more targeted way the aforementioned experiments.

4.1. Arvidson's phenomenology of attention: theme, context and margin

Sticking to the earlier programmatic claim, according to which every analysis must ultimately be traced back to the experiential evidence that sustains it, Arvidson's starting point is that neither the metaphor of the spotlight nor the "capacity theory" meet this requirement. Indeed, we never meet in our experience something like a limited resource being allocated to select stimuli, just as we do not find an attentional beam that sheds light to some items while keeping the others in the dark. Naturally, both theories do grasp something real about how we actually attend: in fact, in order to be considered true in certain contexts, there must be something in our experience in which they are reflected and from which they are generated by means of an abstractive process. However,

---

[7] In our opinion, this is not due to a generic carelessness, but rather to deeper reasons which are related to the essence of attentive experience as such. However, an in-depth analysis of this point – which we count on making in the future – exceeds the purposes of this paper.

approaching this problem from a phenomenological perspective means precisely shifting our interest from what is generated to what is *generating*, that is, to the very process of *genesis*. We will not, therefore, primarily focus on the already objectified images that model attention to make it measurable and quantifiable, but rather to the original and ever-present experience of attention on the basis of which these images can endure.

So, if the world we live in is not a world in light and dark or mediated by a neutral filtering diaphragm, what are then – according to Arvidson – the general and formal structures of our experience of attention? Before tracing any description, Arvidson (1996, p. 72) begins by distinguishing between the attentional noesis (what he calls "consciousness of the field"), the attentive direction toward a content, and the noematic sphere of all that is presented and attentively intended, namely, the "field of consciousness". After this preliminary distinction, Arvidson proceeds by outlining those which – within certain limits (Arvidson 1992) – he considers the most general structures of the field of attentive consciousness: its organization in terms of "*theme*", "*thematic field*" (or "*context*") and "*margin*"[8].

The theme is what can be said to be more similar to James' "focus", that is, what most engrosses one subject's attention. The theme presents itself as focal and prominent. The words on which the reader's eyes rest at this moment are an example of a theme. Yet, a theme does not need to be nitid: I may be focusing on a face in the fog as thematic, whose identity is nevertheless not clear to me.

Secondly, the context "consists of all the co-present items in experience that are relevant to the theme, but are not themselves thematic" (Arvidson 1996, p. 73). For example, a contextual element of the words that I am now writing is the white background from which they stand out. It is very important to remark that the co-presence of the context does not strictly need to be temporally simultaneous: for instance, what Husserl called "retention" – the immediate past which is maintained in our present experience, making this possible – is also part of the context, for it is co-present as a close horizon from which the theme emerges and with which it is in direct continuity. As a last point, any theme is necessarily situated within a context: words could be written on a screen, on a piece of paper or on the palm of one's hand, but they could not be a concrete phenomenon in the absence of any pertinent thematic field.

Finally, Arvidson (2006, pp. 6-9) presents the margin as a sort of halo of experience, consisting of all that is irrelevant to the theme and

---

[8] This distinction openly sources from Aron Gurwitsch's former works (Gurwitsch 2009a, chap. 3; 2010, part 5).

the thematic field, but is anyway present. Examples of the margin are bodily awareness (proprioception) or the environing world, like the room I am in or the chair I am sitting on. It is extremely important to stress that what makes something marginal *has nothing to do with a spatial position*: being marginal does not mean being situated far from the theme. Indeed, if there was an ink stain on my paper that did not obstruct me from fluently reading, it would be marginal. Moreover, just as the context does not necessarily have to be simultaneous, even marginality may not be strictly bound to the present: the retention of a feature that is totally unrelated to my current theme – such as the position of my legs during writing, which I could recall if I were asked to tell it – is still and fully marginal[9]. As a consequence, marginality does not have anything to do with spatiotemporal existence; rather, it is a matter of *meaning*. In this sense, to be marginal means being unrelated, disconnected, irrelevant, or non-pertinent *in terms of meaning* with respect to the theme.

As a last but fundamental consideration, we must highlight that, in Arvidson's purpose, talking about the organization of the field of consciousness mainly refers to what Husserl would have called passive syntheses, and only remotely to something which has to do with our personal intentions. As Arvidson (2006, p. 82) argues, the constant reconfiguration of our experience is not primarily an effect of our will: indeed, "the subject does not make the targeted content thematic, the subject *allows* it to present itself as thematic". Of course, voluntary attention is a possibility of ours, but anyone could personally notice that this only occurs quite rarely: what happens most of the time is a constant restructuration of our phenomenal contents on the basis of pre-delineations of incoming perceptual developments, something which mainly occurs independently of our determined intentions[10].

---

[9] These analyses of intentional interweaving – linked to what are basically the most elementary elements of the field of consciousness – are a perfect example of how, once again, phenomenology is not the description of simply present phenomena, but the explication of complexly layered systems of intentional implications.

[10] Due to the limited space, we need to stop here our exposition of Arvidson's analysis. However, we would like to remark that Arvidson's intent is to outline an exhaustive account of the attentional experience, *comprehensive* – and *not* exclusive – with respect to the descriptions that positive sciences make of it. Consider, in this sense, Arvidson's effort in translating the lexicon of empirical psychology (e.g., "selective attention", "priming", "target", "attentional blink", "automaticity", "pre-cuing", "attentional costs", "distractors", "early-" and "late selection", etc.) into phenomenological terms, so that the contributions of the latter can be borrowed in an easier way by empirical-experimental contexts – while remaining aware of the irreducible difference in level between the two of them (Arvidson 2003).

5. Reconsidering digitized attention

At this point, there is a main question still left to ask: how can data provided by Ophir, Nass and Wagner and by Cain and Mitroff be evaluated in the light of the previous phenomenological analyses? More precisely, how can Arvidson's phenomenology of attention help us interpret HMMs' greater difficulty in filtering out irrelevant stimuli?

To be honest, if we had to strictly limit our considerations to the empirical studies we examined before and to translate them into phenomenological terms, the only conclusion we could draw is that these experiments have actually little to say on HMMs' concrete way of attending: indeed, failing in focusing on red shapes – that is, in making them thematic – to the advantage of "distracting" blue shapes (which are part of the *context*, of the same "whole" that is the "set of red and blue items") is nothing but the most common shift of attention of our daily lives ever! In fact, whenever we focus on something and make it thematic, it is quite frequent that what appears close to it – like the image on the cover of a book after having read the title – somehow "struggles" to emerge as a new theme. Even in voluntary attention, when we force ourselves not to take our look off what we are focusing on, a perceptual conflict between the actual and potential themes *passively* occurs, outlining an attentive reconfiguration with which we are highly familiar.

Does this mean that Ophir, Nass and Wagner's and Cain and Mitroff's suggestions should directly be considered invalid? Again, this is not the case. Indeed, the potential of phenomenology in similar circumstances does not simply consists in rejecting in principle all empirical data, thereby liquidating the scientific value of any result produced in an experimental context. Rather, a phenomenological approach can allow us to clarify the concepts used in a scientific inquiry, elucidating the concrete experience to which they mean to refer, as well as in pointing out when they fail to do so[11].

Coming back to our case, phenomenology helped us to critically consider arrays of red and blue shapes employed in experimental tasks as adequately providing cases of distraction in the proper sense. But, after all, what the authors of the abovementioned studies had in mind was not to investigate whether or not HMMs are more affected than LMMs by blue rectangles in a controlled situation; rather, their inspiring question was if and how assiduous media users ultimately turn out to be more distractable – thus assuming a direct connection between media consump-

---

[11] In this sense, an experimental context is not a source of invalidity as such, but it is rather a misleading conceptuality or an inappropriate use of it in an experiment that make its results at the very least questionable.

tion and inattention. In order to approach such an issue, our first and main question should therefore be: what does it mean to be distracted?[12] – Or, to put it more controllably, what can be properly considered as a distractor and how can phenomenology help us seize its typical traits?

5.1. Sketches for a phenomenology of distraction

Without claiming to be exhaustive, to sketch a possible account of distraction in phenomenological terms we can refer to a paragraph by Arvidson (2006, pp. 78-84), where – speaking of "transformations in attending" – he addresses the question of "how attention captures marginal content". The author opens his analysis by introducing the example of an ideal distractor, that is, an alarm:

> Suppose that suddenly, as I am writing, the deafening home alarm system sounds […]. Eventually I will get a thematic grip on this rude sonorous interruption. But the question here is how does this theme enter into attention? When we say it "captured" my attention, was it first somehow marginal, and then thematic? Or is there just a disconnected gap between the previous theme and the present one, a "blink" in attention perhaps marked by fright and adrenaline? (Arvidson 2006, p. 79)

Arvidson's questions are simple, but they get straight to the point: anyone knows that alarms suddenly burst in our experience and somehow catalyse it, but how does this happen? What are the phenomenal features of this event, so that our attention gets wholly absorbed? In our opinion, Arvidson's inquiry enables us to identify at least three of such characteristics, namely 1) unrelatedness, 2) passivity, and 3) relative discontinuity.

As to the first feature, Arvidson (2006, p. 79) affirms that a distractor "almost immediately supplants what was previously thematic". Yet, pushing us away from a pre-existing theme is not sufficient for something to be properly understood as a distractor; in fact, to call it this way, *what distracts us must also come from the margin*[13]. Indeed, if something from the context attracted our attention – such as a sentence following the one we just read – we would not say that we have been distracted at all. In

---

[12] A question that is only apparently trivial, but which – as effectively shown by Depraz (2014, pp. 80 ff.) – actually constitutes an authentic philosophical problem.

[13] Although necessary, this must not be considered as a sufficient condition for distraction. For example, if I thoughtlessly laid on a sunbed near the seashore and a mosquito buzzed close to my ear, I would acknowledge that it annoyed me, but I would be reluctant to say that it distracted me. In this sense, distraction seems to imply the violation of a theme that is somehow *normative*, in the broad sense of something that was meant to endure.

this regard, an essential trait of distraction seems to be the *unrelatedness* between subsequent themes: since the distracting object has come from the margin, *there is no pertinence or relevance between the old and the new theme*.

Another feature of distraction consists in the fact that it is generally experienced as something suffered. For example, in the abovementioned case of an alarm we have a typically *passive* disposition[14]: as Arvidson (2006, p. 80) puts it, "the power the deafening alarm has in attending is immense, such that an orienting response which almost immediately makes it thematic is seemingly irresistible". Echoing what was previously said about passive syntheses, Arvidson (2006, p. 82) stresses the fact that the "replacement of one theme with another is not completely willed, as if the sphere of attention were a landscape and the subject was a landscape architect". Naturally, voluntary attention has its own efficacy, but "endogenous selection can at most *prepare* the sphere of attention for the likelihood or inevitability of such a transformation of contents" (Arvidson 2006, p. 82), and not rigidly determine it.

A third aspect of distraction is that it seems to produce a break in our experience: unlike the density of an enduring theme in which we are engaged, the irruption of a distractor – because of its unrelatedness – implies some sort of discontinuity. However, with respect to this point, Arvidson (2006, pp. 79-80) firmly reiterates that any interruption can appear *only* against the background of continuity: indeed, a perceptual shift from the margin to the theme does not outline two fully separate contents, two moments of intact attention that are just subsequent one to another with no reciprocal interferences. Rather, there is a temporal halo of our previous experience that is utterly insuppressible. For example, "when we interrupt our dealing with a scientific topic to pay attention to something which happens in our environment, we also retain a certain awareness of our previous activity" (Gurwitsch 2009b, p. 365). This time stream condensed by retention[15] at the same time makes the disruption between contiguous experiences possible and it provides consciousness with an immanent unity that no interruption can break.

---

[14] The word "passive" must be understood here as a phenomenological trait, opposed to that of activity, and not as something that would derive "from the outside". In fact, an intrusive thought or the symptom (common to various psychopathologies) of hearing voices are fully passive and distracting experiences, albeit "internal", in psychological terms.

[15] As well as by protention, on the other hand.

Conclusions

As stated above, the adoption of a phenomenological approach has allowed us to relativize the experimental results achieved by Ophir, Nass and Wagner and by Cain and Mitroff: in our opinion, the modulation of attention in the exposure to sets of geometric figures (where participants are instructed to only focus on some of them) cannot be considered a fully adequate example of distracting experience.

Nonetheless, these studies attest recurrent differences in performance between HMMs and LMMs, which are a finding in themselves – regardless of whether it is precisely distractibility that was tested – and which need to be further investigated. In our view, phenomenology can provide important tools for effectively conducting inquiries of this kind, as it is capable of specifying in a conceptually meticulous manner what could be tested experimentally. For example, the aforementioned analyses by Arvidson can help to clarify the very characteristics of distraction – thus justifying to reasonably suggest that in several cases *digital media appear in our lifeworld experience precisely in the form of distractors*. No matter whether it is an acoustic ringtone, a tactile alarm or even an intrusive thought about checking our Facebook profile: these cases must be classified as distracting, for they all move from the margin to the theme and present the feature of unrelatedness to previous themes.

A similar case study provides a clear example of *qualitative* analysis, which Ophir, Nass and Wagner themselves praise, but which ultimately seem to contravene with their conclusions. Indeed, every time we faced distraction, we never considered it as a lack of attention; quite on the contrary, we tried to account for it as a *different structure in shaping our attentive experience to the world*. If this is correct, any attempt to grasp the specific forms of inattention affecting assiduous digital media users can only take the measure of distractibility as an abstract starting point, since *distraction is not the absence of attention, but a different way of attending* – which is in principle not quantifiable.

These observations, on the one hand, witness how phenomenology and empirical sciences inevitably work on different planes; yet, on the other hand, they also suggest the path for a possible interaction between the two domains. In this sense, formally detecting the structures of distraction (although in a rough manner) does not only aim to point out the experimental cases where it is not properly in cause, but also means to provide a more accurate insight to be eventually tested. Actually, we believe that Ophir, Nass and Wagner's approach at least suggests an affinity in principle with our proposals, for example when they sharply hypothesize that HMMs' difficulty in filtering distractors "*may be a difference in orientation rather than a deficit*" (Ophir, Nass, Wagner 2009, p. 15585).

Programmatic assumptions of this type open up unmapped fields of research, where phenomenology and empirical sciences can prove a virtuous interaction. Do the perceptual anticipations of habitual media users change? If so, at what level do they? How do associative connections work differently between digital records and non-interactive ones (like a book)? When do digital media break in as distractors and when, if they do, are they in continuity with offline activities? How and when do we perceive the difference between virtual and offline contents? Of course, studies on these issues have already been carried out for decades. However, the specific questions that guide them make all the difference – and maybe, as we hope to have at least suggested, phenomenology can make here a fundamental contribution in focusing on the right questions to answer.

Bibliography

Husserliana (Hua):
Hua III/1: *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie. Erstes Buch. Allgemeine Einführung in die reine Phänomenologie*, Martinus Nijhoff, Den Haag, 1976.
Hua VIII: *Erste Philosophie (1923/24). Zweiter Teil. Theorie der phänomenologischen Reduktion*, Martinus Nijhoff, Den Haag, 1959.
Hua XI: *Analysen zur passive Synthesis. Aus Vorlesungs- und Forschungsmanuskripten 1918–1926*, Martinus Nijhoff, Den Haag, 1966.
Hua XVIII: *Logische Untersuchungen. Erster Band. Prolegomena zur reinen Logik*, Martinus Nijhoff, Den Haag, 1975.
Hua XXXVIII: *Wahrnehmung und Aufmerksamkeit. Texte aus dem Nachlass (1893-1912)*, Springer, Dordrecht, 2004.

Arvidson, P.S.
1992   *On the Origin of Organization in Consciousness*, in "Journal of the British Society for Phenomenology", vol. 23, n. 1, pp. 53-55.
1996   *Toward a Phenomenology of Attention*, in "Human Studies", vol. 19, pp. 71-84.
2003   *A Lexicon of Attention: From Cognitive Science to Phenomenology*, in "Phenomenology and the Cognitive Sciences", 2: 99-132.
2006   *The Sphere of Attention. Context and Margin*, Springer, Dordrecht.

Baumgartner, S.E., Lemmens, J.S., Weeda, W.D., Huizinga, M.
2017   *Measuring Media Multitasking: Development of a Short Measure of Media Multitasking for Adolescents*, in "Journal of Media Psychology: Theories, Methods, and Applications", vol. 29, n. 2, pp. 92–101.

Broadbent, D.E.
1958   *Perception and Communication*, Pergamon Press, Oxford.

Cain, M.S., Mitroff, S.R.
2011   *Distractor Filtering in Media Multitaskers*, in "Perception", vol. 40, n. 10, pp. 1183-1192.

Dennett, D.C.
1991   *Consciousness explained*, Little, Brown and Company, Boston.

Depraz, N.
2004   *Where Is the Phenomenology of Attention that Husserl Intended to Perform? A Transcendental Pragmatic-Oriented Description of Attention*, in "Continental Philosophy Review", vol. 37, pp. 5-20.
2014   *Attention et vigilance. À la croisée de la phénoménologie et des sciences cognitives*, PUF, Paris.

Gallagher, S.
2003   *Phenomenology and Experimental Design*, in "Journal of Consciousness Studies", vol. 10, nn. 9-10, pp. 85-99.

Gurwitsch, A.
2009a   *The Collected Works of Aron Gurwitsch (1901-1973), Volume I: Constitutive Phenomenology in Historical Perspective*, eng. trans. by J. García-Gómez, Springer, Dordrecht.
2009b   *The Collected Works of Aron Gurwitsch (1901-1973), Volume II: Studies in Phenomenology and Psychology*, eng. trans. by F. Kersten, Springer, Dordrecht.
2010   *The Collected Works of Aron Gurwitsch (1901-1973)*, Volume III: The Field of Consciousness: Theme, Thematic Field, and Margin*, eng. trans. by R.M. Zaner, L. Embree, Springer, Dordrecht.

Husserl, E.
1939   *Erfahrung und Urteil. Untersuchungen zur Genealogie der Logik*, Academia/Verlagsbuchhandlung, Prag.

James, W.
1890   *The Principles of Psychology*, Harvard University Press, Cambridge-London 1983.

Kahneman, D.
1973   *Attention and Effort*, Prentice-Hall, Englewood Cliffs (NJ).

Levy, E.C., Rafaeli, S., Ariel, Y.
2016   *The Effect of Online Interruptions on the Quality of Cognitive Performance*, in "Telematics and Informatics", vol. 33, n. 4, pp. 1014-1021.

Merleau-Ponty, M.
1945   *Phénoménologie de la perception*, Gallimard, Paris; eng. trans. *Phenomenology of Perception*, Routledge, London 1981.

Metzinger, T.
2003   *Being No One*, MIT Press, Cambridge (MA).

Ophir, E., Nass, C., Wagner, A.D.
2009   *Cognitive Control in Media Multitaskers*, in "Proceedings of the National Academy of Sciences of the United States of America", vol. 106, n. 37, pp. 15583–15587.

Ralph, B.C.W., Thomson, D.R., Cheyne, J.A., Smilek, D.
2013   *Media Multitasking and Failures of Attention in Everyday Life*, in "Psychological Research", vol. 78, n. 5, pp. 661-669.

Schmicking, D.
2010   *A Toolbox of Phenomenological Methods*, in S. Gallagher, D. Schmicking (edited by), *Handbook of Phenomenology and Cognitive Science*, Springer, Dordrecht, pp. 35-55.

Stothart, C., Mitchum, A., Yehnert, C.
2015   *The Attentional Cost of Receiving a Cell Phone Notification*, in "Journal of Experimental Psychology: Human Perception and Performance", vol. 41, n. 4, pp. 893–897.

Thornton, B., Faires, A., Robbins, M., Rollins, E.
2014   *The Mere Presence of a Cell Phone May Be Distracting: Implications for Attention and Task Performance*, in "Social Psychology", vol. 45, n. 6, pp. 479-88.

Ward, A.F., Duke, K., Gneezy, A., Bos, M.W.
2017   *Brain Drain: The Mere Presence of One's Own Smartphone Reduces Available Cognitive Capacity*, in "Journal of the Association for Consumer Research", vol. 2, n. 2, pp. 140-154.

On the Margins of Consciousness.
Sketches for a Phenomenology of Digitized Attention

In the vast panorama of digital studies, numerous works have investigated the cognitive consequences of digital devices on attention. In the present paper we will examine two among the best-known empirical studies on digitized attention in assiduous media users, aiming to cope with this issue in terms of a qualitative modification. We will then try to argue that the authors of such articles end up contravening their intentions, providing results that – as a natural consequence of their conceptual premises – ultimately seem to understand digital users' distraction as a lack of attention. In this regard, we will briefly retrace Paul Sven Arvidson's phenomenological account of attention and distraction, suggesting its potential role in reinterpreting the previous experimental findings. We will thus mean to outline a case study in which phenomenology and empirical sciences can prove a concrete and fruitful interaction.

KEYWORDS: digital, phenomenology, psychology, attention, phenomenological method.