Towards an-iconology: the image as environment

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This essay describes the evolution of what I term the 'environmentalization' of the image, especially in the context of various historical instantiations that have culminated in the contemporary virtual *dispositif* known as the head-mounted display (HMD). As soon as users don one of these helmets, they lose a simple yet crucial freedom of which they were previously unaware, namely the liberty to focus on an 'off-image', beyond the borders of the picture. This could be seeing the frame of a painting when deciding to look at the fire extinguisher hanging beside it, or the limits of the cinema screen when choosing to orient the gaze towards the 'toilet' or 'exit' signs, or the edges of one's laptop when grabbing the coffee mug. Conversely, once immersed in the virtual environment offered by a head-mounted display, one can only see images: the iconic landscape incessantly and continuously unfolds in 360 degrees, regardless of the orientation of vision.

This perceptual condition of the total image goes hand-in-hand with the intense feeling of presentness that is elicited by virtual immersive environments.[1] Such presentness is to be understood in the double and correlated sense of the presence of the user in the virtual environment (someone who, by virtue of the increasing multi-sensory implications of such environments, becomes more an 'experiencer' than a visual or passive observer), and the presence of the virtual objects in the real environment. Once the threshold between image and reality has been contested, and ideally erased, what was previously a border becomes instead a highway that allows for a two-way flow, thanks to the

1 Wijnand IJsselsteijn, Fabrizio Davide and Giuseppe Riva (eds), *Being There: Concepts, Effects and Measurements of User Presence in Synthetic Environments* (Amsterdam: Ios Press, 2003).

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institution of a shared continuum in which the space-time of the represented world and the space-time of real life tend to coincide.

In this process – the environmentalization of the experience of image – virtual reality (VR) immersive environments represent the last stage of a complex historical development, for which the history of cinema offers a number of remarkable pioneering examples. The dawn of cinema is famously marked by the story of the first projection on 6 January 1896 of *L'arrivée d'un train en gare de La Ciotat*/*Arrival of a Train at La Ciotat* by the Lumière Brothers, when the audience, gripped by panic, allegedly stampeded from the theatre to avoid being run over by the oncoming locomotive. What has been defined as 'cinema's founding myth'[2] was undoubtedly just that, but it has nonetheless proved a fecund creation, the apparent inspiration for a number of early short films that have contributed to the complex and long-lasting affair between cinema and the railway.[3] Telling instances of this mutual attraction include *The Countryman's First Sight of the Animated Pictures* (Robert W. Paul, 1901) and *Uncle Josh at the Moving Picture Show* (Edwin S. Porter, 1902), both of these being meta-films that represent the projection of a film as well as the initially blasé, then terrified, reaction of a naive spectator at the approach of a train towards the foreground. This legend has also triggered parodies such as the Italian B-movie *Superfantozzi* (Neri Parenti, 1986), in which the main character Ugo Fantozzi tries to reassure the panicking audience about the illusionistic effect of the image, but in so doing is run over by the train. It has also fed a *longue durée* of similar sequences such as that in Chris Milk's VR film *Evolution of Verse* (2015), which starts with a steam train crossing a mountain lake. The train rapidly encroaches on the foreground of the image until, at the point of impact with the viewer's body in the virtual space, it explodes and metamorphoses into a huge flock of birds (figure 1).[4]

Once the threshold between image and reality is thought of as crossable, it becomes possible to conceive of it as a two-way street, in which elements can not only exit from the image into reality but vice versa, as phenomena from reality step into the image. Such a condition strives to establish a continuum that tends to equal the space-time of the represented world and the space-time of real life. In this situation the subject is no longer an observer 'in front of' an image-world separated from the real world, but rather an experiencer immersed in an environment encompassing both worlds.

A suggestion of this 'inward/outward' dialectic can be found in the train footage featured in Dziga Vertov's *Kino-Eye* (1924) and *Man with a Movie Camera* (1929). The former displays the classic convergence of a train with the foreground, the latter the train's progression towards the background seen from a non-human point of view, that of the railway tracks (a perspective that invites the spectators to embody the motor orientation of the camera-train as if they were penetrating the diegetic visual field).

2 Martin Loiperdinger and Bernd Elzer, 'Lumière's arrival of the train: cinema's founding myth', *The Moving Image*, vol. 4, no. 1 (2004), pp. 89–118.

3 Lynne Kirby, *Parallel Tracks: The Railroad and Silent Cinema* (Durham, NC: Duke University Press, 1997). A specific festival – CineRAIL. International Festival Trains on Film – has been held for over 20 years since 1992, <http://www.cinerail-fest.com> accessed 14 August 2020.

4 Chris Milk, *Evolution of Verse* (2015), <https://www.with.in/watch/evolution-of-verse/> accessed 14 August 2020.

Fig. 1. ***Superfantozzi*** **(Neri Parenti, 1986);** ***Evolution of Verse*** **(Chris Milk, 2015).**

Buster Keaton's contemporaneous *Sherlock Jr.* (1924) summarizes in a single work what Vertov showed in two separate films. Keaton plays a projectionist who is in love with an attractive young woman, and is placed in a bad light when an unscrupulous rival unjustly accuses him of stealing a watch belonging to the woman's father. Falling asleep during a screening, the projectionist dreams he is a detective, and this oneiric alter-ego detaches himself from the 'real' sleeping projectionist, steps onto the stage, and enters the film by passing through the screen before interacting with the other actors. His rival expels him from the screen, but the projectionist refuses to give in and eventually regains his place in the scene. As soon as he re-enters the screen, the dreaming protagonist experiences the shocking contradiction between the space-time continuum in which he still lives and the space-time interruptions produced by the montage. This brilliant meta-reflection on the specific nature of film editing with respect to the theatrical and real-life construction of space-time is fascinating, but more compelling still is the realization that that *Sherlock Jr.* offers one of the earliest examples of the obliteration of the threshold between the space of representation and the space of reality. The fact that both reality and its representation belong to the diegetic world of *Sherlock Jr.* – that reality is represented reality, and consequently representation is represented representation (representation to the power of two) – constitutes the specific 'metalinguistic' nature of this film.

This 'in/out' topos established by Keaton has resurfaced in varying ways throughout the history of cinema and of other moving-image media. *Videodrome* (David Cronenberg, 1983), *The Purple Rose of Cairo* (Woody Allen, 1985), the rotoscoping video for the A-ha song *Take on Me* (Steve Barron, 1986), and the 2018 McCann advertising campaign for Nespresso, *The Quest* (starring George Clooney), are remarkable examples (figure 2).[5] *Sherlock Jr.* is one of the key films to spawn the idea that cinematographic spectatorship is primarily a process of absorption in which the subject sits in a dark room and is drawn into the projected flow of images. As Siegfried Kracauer put it, the film spectator

> drifts toward and into the objects – much like the legendary Chinese painter Wu Daozi who, longing for the peace of the landscape he had

5 'Arise Knight George', *Nespresso*, 18 October 2018, <https://www.nestle-nespresso.com/media/mediareleases/george-clooney-natalie-dormer-nespresso-campaign-quest> accessed 14 August 2020.

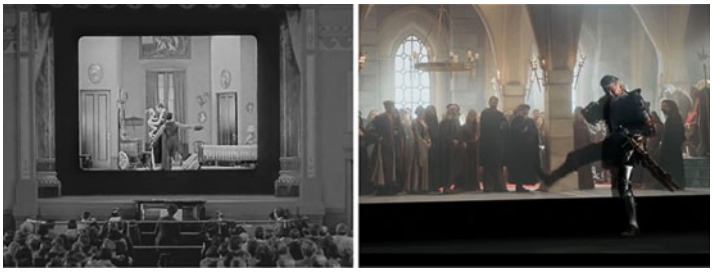

Fig. 2. ***Sherlock Jr.*** **(Buster Keaton, 1924); the McCann campaign for Nespresso,** ***The Quest*** **(2018).**

> created, moved into it, walked toward the faraway mountains suggested by his brush strokes and disappeared in them never to be seen again.[6]

From the legend of the Lumière Brothers' train (*out*wards) we are transported back to this legend of a master of the seventh century T'ang dynasty, the painter who disappeared (*in*wards) in the picture.

The Wu Daozi legend, which fascinated many European intellectuals such as Ernst Bloch and Walter Benjamin,[7] was taken up by the film theorist Béla Balázs to postulate a conflation of the Chinese and American spatial imaginary in contrast to the European one. According to Balázs, 'Such tales could never have been born in the minds of men brought up in European ideas of art. The European spectator feels the internal space of a picture as inaccessible, guarded by its own self-sufficient composition.' However, Balázs argued, 'such strange stories as those Chinese tales could easily have been born in the brain of a Hollywood American',[8] someone who conceived fictional space in a continuum with real space. Balázs had notably been a pupil in Berlin of Georg Simmel,[9] who devised the paradigm of the 'European spectator' who remained separated from the inaccessible space of the image. In 1902 Simmel published a crucial short text on the aesthetic function of the picture frame, in which he unequivocally affirmed the need to rigorously maintain the separation of the image world and the actual world. Reflecting on the 'island-like position which the work of art requires vis-à-vis the outer world', Simmel wrote:

> It is therefore of the greatest importance that the design of the frame makes possible this continuous flowing of the gaze, as if it always flowed back into itself. That is why the frame, through its configuration, must never offer a gap or a bridge through which, as it were, the world could *get in* or from which the picture could *get out* – as occurs, for instance, when the picture's content extends into the frame, a fortunately rare mistake, which completely negates the work of art's autonomous being and thereby the significance of the frame.[10]

In this short text, penned at the dawn of the 20th century, Simmel felt the need to reaffirm the primacy of the boundary precisely because he had begun to fear what his contemporaries, such as Vincent van Gogh and

6 Siegfried Kracauer, *Theory of Film: The Redemption of Physical Reality* (1960) (Princeton, NJ: Princeton University Press, 1997), p. 165.

7 See Andrea Pinotti, 'The painter through the Fourth Wall of China: Benjamin and the threshold of the image', in Sigrid Weigel and Daniel Weidner (eds), *Benjamin-Studien 3* (Munich: Fink, 2014), pp. 133–49; Shieh Jhy-Wey, 'Grenze wegen Öffnung geschlossen. Zur Legende vom chinesischen Maler, der in seinem Bild verschwindet', in Jürgen Wertheimer and Susanne Gőße (eds), *Zeichen lesen, Lese-Zeichen* (Tübingen: Stauffenburg, 1999), pp. 201–25.

8 Béla Balázs, *Theory of Film: Character and Growth of a New Art* (1949), trans. Edith Bone (London: Dobson, 1952), p. 50.

9 On Simmel's influence on Balázs, see Gertrud Koch, 'Béla Balázs: the physiognomy of things', *New German Critique*, no. 40 (1987), pp. 167–77.

10 Georg Simmel, 'The picture frame: an aesthetic study' (1902), trans. Mark Ritter, *Theory, Culture and Society*, vol. 11, no. 1 (1994), pp. 12–13.

Gustav Klimt, were beginning to do to the frame – even though, in his eyes this remained 'a fortunately rare mistake'. Nonetheless, within a few years the European avant garde – Robert Delaunay, Wassily Kandinsky, Giacomo Balla and Salvador Dalí, among others – would systematically implement a collapse of the boundary, enabling the overflowing of forms and colours onto the borders of the frame, and more generally the deconstruction, if not complete negation, of the frame as a separating and enclosing *dispositif*. All of this consequently meant the reciprocal merging of image and reality.

It is possible that the negation of a particular *dispositif* may still entail (somehow dialectically, in a Hegelian sense) its own recognition. While numerous visual artists of the 20th century fiercely criticized the frame in terms of their practice, the theorization of the frame itself – from Simmel to José Ortega y Gasset, from Meyer Schapiro to Jacques Derrida, from Rudolf Arnheim to the Groupe μ, and from Louis Marin to Victor Stoichita – became increasingly prominent.[11] Such a powerful drive towards *unframedness*, as more recently practised in contemporary art, actually arises from the rich tradition of illusionistic and *trompe l'oeil* painting, in which the trespassing of the frame has been one of the major strategies used to suggest the continuity between iconic and real spaces.[12] In terms of *inward* penetration, the foundational anecdote is Zeuxis's depiction of a bunch of grapes in such a naturalistic manner that the birds, unaware of its iconic nature, might fly down to peck at it.[13] For *outward* extrusion there are countless instances of phenomena protruding from framing devices (figure 3): Carlo Crivelli's cucumber in *Annunciation, with Saint Emidius* (1486), and in his *Saints Catherine of Alexandria and Mary Magdalene* (c. 1491–94), where the right and left feet respectively peep out of the inferior pictorial border. In Pere Borrell del Caso's famous painting *Escaping Criticism* (1874), it is not merely the foot but the entire body of a young boy that appears to climb out of the frame, thus implying that escaping criticism also entails escaping the picture. Even French contemporary artist ORLAN's series *Attempting to Escape the Frame* (1965) carries on this conceptual tradition.

Stereoscopes, first invented by Charles Wheatstone in 1838 and subsequently developed by David Brewster and Oliver Wendell Holmes, arguably sit within this trajectory, as does the *Kaiserpanorama*, a multi-viewer stereoscopic viewing apparatus patented by August Fuhrmann in 1890. They all belong to the family of *dispositifs* seeking to 'unframe' the experience of images in order that they coincide with or envelop the visual field of the observer. This lineage continues with the intermittent development of stereoscopic cinematography (whose media-archaeological implications were brilliantly investigated by Sergei Eisenstein as early as 1947), dome cinemas, CAVE (Cave Automatic Virtual Environment) and AVIE (Advanced Visualization and Interaction Environment) systems, as well as more recent fully interactive panoramic immersive VR environments[14] and head-mounted displays such as the Oculus Rift or HTC Vive.

11 See Daniela Ferrari and Andrea Pinotti (eds), *La cornice: Storie, teorie, testi* (Milan: Johan and Levi, 2018).

12 See Oliver Grau, *Virtual Art: From Illusion to Immersion*, trans. Gloria Custance (Cambridge, MA: MIT Press, 2003).

13 Pliny the Elder, *Natural History, Volume IX, Books 33–35*, ed. Harris Rackham (Cambridge, MA: Harvard University Press, 1961), p. 309.

14 Sergei M. Eisenstein, 'On stereocinema' (1947), trans. Sergey Levchin, in Dan Adler, Janine Marchessault and Sanja Obradovic (eds), *3D Cinema and Beyond* (London: Intellect, 2014), pp. 20–59. On evolution of 3D, see Thomas Elsaesser, 'The "return" of 3-D: on some of the logics and genealogies of the image in the twenty-first century', *Critical Inquiry*, no. 39 (2013), pp. 217–46. For dome, CAVE and AVIE systems see, for example, *Planetarium*, <https://planetarium.dk/en/dome-theater-and-exhibitions/> accessed 14 August 2020; Siddhesh Manjrekar, Shubhrika Sandilya, Deesha Bhosale, Sravanthi Kanchi, Adwait Pitkar and Mayur Gondhalekar, 'CAVE: an emerging immersive technology – a review', *UKSim-AMSS 16th International Conference on Computer Modelling and Simulation*, no. 3 (2014), pp. 131–36; Matthew McGinity, Jeffrey Shaw, Volker Kuchelmeister, Ardrian Hardjono and Denis Del Favero, 'AVIE: a versatile multi-user stereo 360° interactive VR theatre', in *Proceedings of the 2007 Workshop on Emerging Displays Technologies: Images and Beyond: the Future of Displays and Interaction* (New York, NY: ACM Press, 2007), <http://www.icinema.unsw.edu.au/assets/190/avie.EDT2007.11.pdf> accessed 14 August 2020; Sarah Kenderdine, Jeffrey Shaw and Anita Kocsis: 'Place-hampi: co-evolutionary narrative and augmented stereographic panoramas, Vijayanagara, India', in *New Heritage: New Media and Cultural Heritage* (London: Routledge, 2008), pp. 275–93.

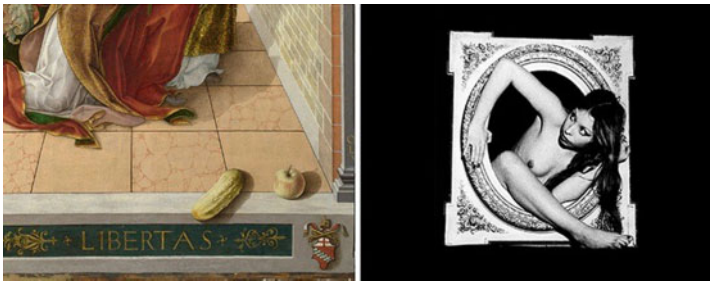

Fig. 3. Detail from Carlo Crivelli's *Annunciation, with Saint Emidius* (1486), London National Gallery collection; ORLAN's *Attempting to escape the frame* (1965), courtesy of the artist.

Represented objects already seem to be perceptually available as a constitutive part of the real environment in illusionistic or *trompe l'oeil* painting, and such effects are all the more seductive in digital virtual environments. A crucial difference needs, however, to be underlined: while in immersive virtual reality (VR) the alternative world created presents itself as being as complex and as engaging as the actual one, in augmented reality (AR) and mixed reality (MR), the integration between virtuality and reality is specifically offered for the purposes of an increasingly effective prosthetic grasp on the latter.

The property of 'presentness'[15] or 'presentification' (the process of making the environment present to the experiencer and the experiencer present in the environment), seems to undermine a mode of thought that has imbued mainstream western image theory since antiquity, something we may designate the 'referentialist' paradigm. According to its classic formulation, as Plato discusses in the 10th book of *The Republic*, the image is mimetic. In other words, it is a more or less faithful imitation of a real entity that pre-exists it and that possesses more reality and more truth than the image itself. The original model is both ontologically and gnoseologically superior to the 'icon' that refers to it. Plato notoriously condemns the 'image-makers', insofar as they produce mere appearances of objects; they are equivalent to the sophists, who only generate apparent knowledge.[16] Leaving aside the fact that Plato's position on images is far more complex than current opinion would admit (dialogues such as the *Meno*, the *Cratylus* and the *Sophist* being more than sufficient evidence), the representationalist model underpinning the doctrine of the image as imitation (*mimesis*) has been infinitely varied through the centuries. This model – exemplified in the idea of the portrait as a re-presentation substituting (and referring to) the re-presented subject – has resurfaced with unexhausted force in modern image theory. C. S. Peirce's semiotics, Edmund Husserl's phenomenology of image conscience, Erwin Panofsky's iconology and Richard Wollheim's analytic theory of depiction all share the conviction that the image is a re-presentation of an entity (either real, like a horse, or imaginary, like a unicorn) which pre-exists, and is independent from, its iconic representation.

If we move from the realm of static images to the domain of moving images, realist theorists like André Bazin, Siegfried Kracauer and Stanley

15 On the paradoxical nature of virtual presence effect, see Fabienne Liptay, 'Neither here nor there: the paradoxes of immersion', in Fabienne Liptay and Burcu Dogramaci (eds), *Immersion in the Visual Arts and Media* (Leiden: Brill-Rodopi, 2016), pp. 87–108.

16 See Plato, *The Republic*, ed. Giovanni R.F. Ferrari, trans. Tom Griffith (Cambridge: Cambridge University Press, 2003), pp. 314–18.

Cavell have all stressed the effectiveness of film in directly representing reality (small wonder that in this respect they underline the derivation of film from photography).[17] It was Panofsky, again, who synthesized this idea into the radical formulation 'The medium of the movies is physical reality as such'.[18]

This is not to say that in the history of western (let alone of non-western) image theories we cannot find non-referentialist alternatives. Instances of this are the pre-platonic, non-mimetic experiences of archaic Greek idols like the fixed *kolossos* (a substitute for the absent corpse of the dead) and the portable *xoanon* (a sacred figure carved in wood), as brilliantly investigated by Jean-Pierre Vernant.[19] There are also the many variants of so-called 'abstract' art, which German theorists have properly called *gegenstandslos*, or non-objective art. In both cases the image does not operate in terms of the re-presentative and imitative function of a referent, but instead *presents* itself. It is a 'real presence', autonomous in itself and non-dependent on an external model.

In spite of their historical and cultural significance, these counter-examples have not substantially affected the dominant account of the image as 'image-of', as a referential representation pointing to something else. It is precisely this dominant account that virtual immersive environments seem to be progressively and radically challenging, by means of their power of 'presentness'. In Husserl's distinction, perception is actualized and present in the flesh, as opposed to image re-presentation: 'An individual is perceived in the strict sense when one is conscious of it in the originary mode, in the mode of actuality "in person", or, more precisely, of primal actuality "in person", which is called the present'.[20]

Because of the presence effect they elicit, virtual immersive environments offer themselves as actual entities to be perceived 'in person' rather than 'images-of' to be grasped in terms of their representational referentiality. In this respect one has to consider a broad spectrum of possibilities: systems that detect the user and systems that do not; systems that provide the user with the possibility of transaction (or 'affordances' in James Gibson's terms) and the means to stimulate agencies, and systems that do not.[21] Different combinations of these dichotomies are also possible. For instance, in Alejandro G. Iñarritu's virtual installation *Carne y Arena* from 2017 (in which, as the work's subtitle says, you are 'virtually present' but 'physically invisible'), although the user is tracked by the system, they cannot interact with the Mexican migrants in the virtual environment. In constrast, David Guez's *Lévitation* (2017) does not insert you as a visible presence or provide any sense of embodied presence in the virtual environment, but you are 'present' in that virtual space because you can interact by trying – with the mind via the EEG (electroencephalography) headset combined with a VR HMD – to levitate a virtual cube.[22] Typically the presence of an avatar – a digital proxy representing the user as a virtual alter-ego in the

17 André Bazin, 'The ontology of the photographic image' (1945), in *What is Cinema? Volume I*, ed. Hugh Gray (Berkeley, CA: University of California Press, 2005), pp. 9–16; Kracauer, *Theory of Film*; Stanley Cavell, *The World Viewed: Reflections on the Ontology of Film* (Cambridge, MA: Harvard University Press, 1979).

18 Erwin Panofsky, 'Style and medium in the motion pictures' (1934, 1947), in Leo Braudy and Marshall Cohen (eds), *Film Theory and Criticism. Introductory Readings* (Oxford: Oxford University Press, 2009), p. 260.

19 Jean-Pierre Vernant, 'From the "presentification" of the invisible to the imitation of appearance' (1983), trans. Froma I. Zeitlin, in *Myth and Thought Among the Greeks* (New York, NY: Zone Books, 2006), pp. 333–49.

20 Edmund Husserl, 'On the theory of intuitions and their modes' (c. 1918), in *Collected Works, Volume XI. Phantasy, Image Consciousness and Memory (1898–1925)*, ed. Rudolf Bernet, trans. John B. Brough (Dordrecht: Springer, 2005), p. 601.

21 James Gibson, *The Ecological Approach to Visual Perception* (Boston, MA: Houghton Mifflin, 1979), p. 4.

22 *Lévitation* (David Guez, 2017), <http://vrlab.fr/levitation/> and <https://www.youtube.com/watch?v=5D5RrM0htcg&feature=youtu.be> both accessed 14 August 2020.

artificial environment – allows both detection and interaction with other avatars and digital objects.[23]

In recent decades interactivity has aroused great excitement among cyber-enthusiasts, who welcome the possibility of eliminating the distinction between producers and consumers, image-creators and image-spectators – an opposition that can be traced back in the history of aesthetics to the polarity between the theory of genius and the theory of taste. Interaction blurs the distinction between the producer and the consumer, enhancing the latter's liberty to modify and orient narrative development, most typically in virtual storytelling. Such interactive freedom, however, can be illusory, particularly if we consider that interactive choice is essentially limited to set of options (albeit numerous) predetermined by the creator or software programmer. The case of Richard Ramchurn's *The Moment* (2018) is a curious example of such 'choice', as it uses a NeuroSky MindWave headset (similar to the one in Guez's *Lévitation*) to track your level of attention by measuring electrical brain activity. These signals are transmitted to specially created software, to make an edit (according to these fluctuations) from a bank of existing video and audio clips, out of which an estimated 18 billion combinations are possible, generating a final narrative experience of 27 minutes duration.[24]

Saying that virtual immersive environments offer affordances and elicit agencies by means of their unframedness and presentness leads us to a third fundamental property of this type of moving image, intimately intertwined with the other two, that relates to the dual status of these images as both means and media – namely their immediateness and the tendency to conceal that they are mediated. Such a property is paradoxical, given that the effect of immediateness in these environments is obtained via a highly mediated and technologically sophisticated series of strategies.

To understand this paradoxical issue, it is necessary to return to the referentialist paradigm. Here the picture is conceived of as a complex object, composed of both a material support (wooden panel, canvas, paper or glass, with pigments, ink or pixels) and the image appearing in or on it. Husserl, for instance, speaks of the relationship between *Bildding* – the thing-like component of the picture, the physical object (coloured pigments, lines, canvas) – and *Bildobjekt* – what is represented in it, the representing or depicting object.[25] Panofsky describes how we can grasp, at the 'pre-iconographical' level, a recognizable figure – human beings, animals, plants, artificial objects – emerging from lines and colours, what he calls '*primary* or *natural* subject matter'.[26] In one of the most influential analytic accounts of depiction, the theory of 'seeing-in' and 'twofoldness', Wollheim argues that 'the seeing appropriate to representations permits simultaneous attention to what is represented and to the representation, to the object and to the medium'. 'The spectator', Wollheim continues, is and remains 'visually aware

23 On the avatar, see Etienne-Armand Amato and Etienne Perény (eds), *Les avatars jouables des mondes numériques. Théories, terrains et témoignages de pratiques interactives* (Paris: Lavoisier, 2013).

24 *The Moment* (Richard Ramchurn, 2018), <http://braincontrolledmovie.co.uk> accessed 14 August 2020.

25 Husserl, 'Phantasy and image consciousness' (1904–05), in *Phantasy, Image Consciousness and Memory*, p. 21.

26 Erwin Panofsky, *Studies in Iconology: Humanistic Themes in the Art of the Renaissance* (1939) (Boulder, CO: Westview Press, 1972), p. 5.

not only of what is represented but also of the surface qualities of the representation'.[27]

On the contrary, what I term the environmentalizing image – from illusionistic painting to the immersive virtual environment – is characterized by a tendency to suppress any phenomenological awareness of the medium. The observer of a tempera painting can decide to focus their attention on the cracks of the wooden panel rather than on the face of the Virgin Mary; the spectator at an open-air cinema can concentrate on the folds produced by the wind on the screen that deform the physiognomy of the starring actors; the traveller enjoying a film on her laptop must adjust the angle of the screen to avoid being attracted by the reflection of her own face on the glass rather than by the story emanating from it. The user of a head-mounted display, on the contrary, becomes absorbed in the 360-degree iconoscape and loses the liberty to focus either on the medium or on the represented reality.

Commenting on the 'logic of transparent immediacy' back in 1999, Jay David Bolter and Richard Grusin remarked that 'virtual reality is immersive, which means that it is a medium whose purpose is to disappear. This disappearing act, however, is made difficult by the apparatus that virtual reality requires',[28] such as bulky helmets, slow frame rates, jagged graphics, bright colours, bland lighting and system crashes. Since the late 1990s many technical improvements have of course been made to smooth out such imperfections. Nonetheless, we still have to deal with wearable equipment, and even the simple act of deciding to put on and take off this gear constitutes a degree of 'framing' that reminds us of the medium's opacity. Thanks, however, to the rapid pace in the development of nanotechnologies and biotechnologies, we can expect increasingly lighter and smaller devices, capable of integrating themselves with the human anatomy. In the ongoing rush towards forms of brain-computer interface (BCI), VR brain implants are already the goal of various researchers and companies, with the promise of 'neuroreality' as the next step in the process of immersive environmentalization of the image experience.[29]

Insofar as it combines *unframedness* (by obliterating separateness), *presentness* (by denying referentiality) and *immediateness* (by concealing mediation), the nexus of pictures outlined above encompasses a sense of the image that paradoxically challenges their condition of being representational pictures or icons. As such they are veritable 'an-icons', meaning icons that strive to conceal their own iconic status. The hyphen in this term 'an-icon' suggests a tension between their ontological and their phenomenological status: while ontologically remaining pictures, they also tend phenomenologically to negate such being; they are self-negating images. Corresponding to the qualitative properties of these objects, which culminate in contemporary virtual immersive environments, participants engaging with an-icons undergo a subsequent transformation. They are no longer visual observers of the image, but rather experiencers living in a quasi-real space-time. This environment

27 Richard Wollheim, 'Seeing-as, seeing-in, and pictorial representation' (1980), in *Art and its Objects* (Cambridge: Cambridge University Press, 2015), pp. 142, 144.

28 Jay D. Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge, MA: MIT Press, 2000), pp. 21– 22.

29 Kristin Houser, 'Neuroreality: the new reality is coming. And it's a Brain Computer Interface', *Futurism*, 26 July 2017 <https://futurism.com/neuroreality-the-new-reality-is-coming-and-its-a-brain-computer-interface> accessed 14 August 2020.

offers various multisensory and synaesthetic stimuli that permit the interactive sensorimotor affordances, thus promoting an environmentalization of the image.

The main western image theories are inadequate to address this radical shift in spectatorship. I therefore call for an alternative theoretical paradigm, for which I introduce the notion of *an-iconology*, a paradigm aimed at critically investigating the tension between the ontological and the phenomenological stratum of this distinct genre of images.

In his famous 1936 'Work of art' essay, Benjamin described a process of progressive tactilization of the image experience that was inaugurated by the advent of photography as a kind of picture that we can manipulate, a 'picture at hand': 'Every day the urge grows stronger to get hold of an object at close range in an image [*Bild*], or, better, in a facsimile [*Abbild*], a reproduction'.[30] Nowadays we understand the prophetic power of this insight when we observe touch-screen natives, for whom the experience of the image is haptic as well as visual, for whom a picture that cannot be zoomed in or out, rotated or handled, is not really a picture. These interfaces are truly 'digital' in the etymologic sense of the Latin *digitus*, being digit or finger. Can we therefore expect an analogous transformation of the image experience as a consequence of its progressive shift towards immersive environmentalization? According to a 2016 Nielsen audience survey, the average time spent by Americans in front of a screen is more than ten hours per day.[31] What if this 'in front of' becomes 'immersed in'? 'An-iconology', the idea of a set of critical tools to understand our incoming future of immersive natives,[32] is thus needed to avoid the Scylla and Charybdis of techno-euphoria and techno-phobia, and to be ready to understand this emerging phase in the historicity of the image experience.

Such historicity is at the same time a historicity of experience as a whole. Far from being determined by the natural conditions established by anatomy, human beings are naturally technological, or technologically natural: we tend to spontaneously extend our performativity via tools that have a retroactive effect on our perceptual and cognitive functions, modifying them over time. As a cutting-edge technology that profoundly engages the human body in all its perceptual, cognitive and affective implications, VR immersive environments offer a vital opportunity to explore this plexus of nature and technique in its very making.

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30 Walter Benjamin, *The Work of Art in the Age of its Technological Reproducibility, and Other Writings on Media*, ed. Michael W. Jennings, Brigid Doherty and Thomas Y. Levin (Cambridge, MA: Harvard University Press, 2008), p. 23.

31 See Jacqueline Howard, 'Americans devote more than 10 hours a day to screen time, and growing', *CNN*, 29 July 2016, <https://edition.cnn.com/2016/06/30/health/americans-screen-time-nielsen/index.html> accessed 14 August 2020.

32 Frank Steinecke, *Being Really Virtual: Immersive Natives and the Future of Virtual Reality* (Cham: Springer, 2016).