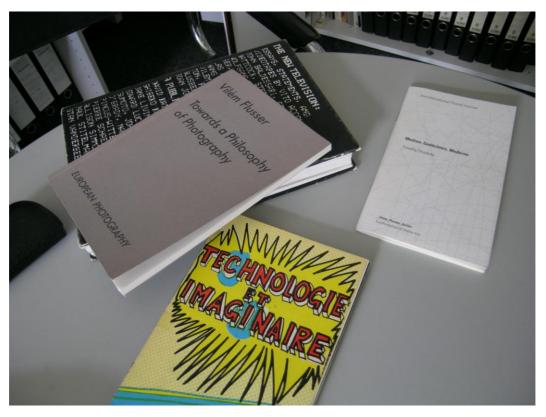
Tim O'Riley The Unassimilable Image



Flusser Archive, Kunsthochschule für Medien, Cologne, March 2006 (photograph | Tim O'Riley)

"The soul that dreams before a light cloud receives at once the image of effusive matter and the dynamic image of ascent. In such a reverie about losing a cloud in the blue sky, the dreamer participates with all his being in a total sublimation. It is truly the image of absolute sublimation. This is the ultimate voyage." (Bachelard 1988: 192)

Preamble

To what extent do images remain resistant to their assimilation by the linguistic and technical systems that society has developed? The increasing plethora of images—maybe it is as accurate to say photographs, given the ubiquity of smartphones and the cameras they carry—produced and shared daily undoubtedly pose questions about what constitutes subjectivity. It could also be maintained that the metadata associated with these images—detailing the location, time, and date at which the photograph was produced, for example—represent a (further) attempt to incorporate them into the aforementioned system, which as Vilém Flusser argued draws on a mode of

thinking that is inherently linear. (Flusser 2002a: 110–6; Flusser 2005a; Flusser 2000) But the image, even though it may be constituted digitally, that is, made up of code with its visual form determined by that code, is experienced, perceived, or 'read' in a fundamentally different manner to the linear thinking encouraged through characters—alphanumeric symbols—arranged sequentially to form texts (words or equations or computer code, for example). With the image, laterality is as significant as linearity. Incompleteness is unavoidable. The form of the image does not presuppose how it should be approached or understood. It presents a synchronic totality.

/Cloud/

Early experiments in the type of spatial representation that came to be known as 'perspective'—for example, Ambrogio Lorenzetti's *The Annunciation* (1344) or Filippo Brunelleschi's lost painting / mirror assemblage of the Florentine Baptistery from the early 15th century—introduced the notion that the world could be represented through a potentially unified system based on a rational understanding of the distribution and order of things. A representation could feasibly jostle with the actual world in terms of believability, the apparent disposition of things presenting to the eye and brain in a manner ideally identical to such a distribution given by the actual world. If an illusion of this sort were regarded from exactly the right position, one could be fooled into thinking that what was being seen was 'real'.

Much has been written about the origins and development of perspective and its relation to subsequent representational systems such as perspective's (much later) relative, the camera. (For example, Damisch 1994; Edgerton 1975; Gombrich 1993; Kemp 1990; Kubovy 1986; Pirenne 1970) An optical reality, in which the photograph could be regarded as analogous to—or at least a cousin of—that produced by a perspectival system, is perhaps one thing. A conceptually instigated, theoretically posed reality, such as that produced by a three-dimensional computer modelling, gaming or virtual reality system, is another. The connectivity enabled through today's computers means such a 'space' is inhabitable across or superimposed upon actual space. Flusser wrote about the relative density of thought such digital apparitions signify: the more dense the distribution of points, the more focused and tangible the results. "Something is more real the denser the distribution is, and more potential the more scattered it is. What we call 'real', and also perceive and experience as such, are those areas, those curvatures and convexities, in which the particles are distributed more densely and in which potentialities realise themselves." (Flusser 1996: 245) It is perhaps less an issue of whether or nor not such apparitions are considered 'real'—given a source of electrical power as a prerequisite, the data streams within the electronic

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realm are as tangible and affective as the table upon which I write—yet, more that reality is as ghostly as these apparitions.

"/Cloud/ has no particular meaning in itself; its only meaning is that which stems from the relations of consecutiveness, opposition, and substitution that link it to other elements in the system." (Damisch 2002: 45)

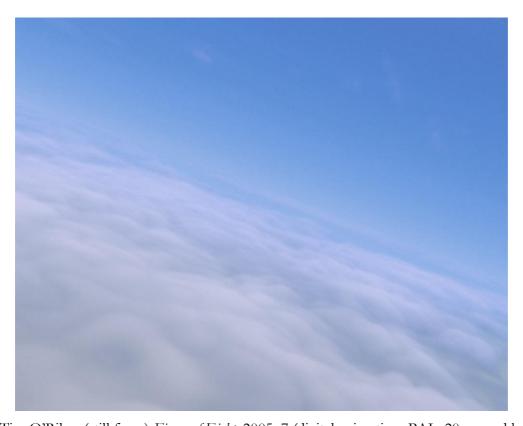
Hubert Damisch's notion of /cloud/ could perhaps be regarded as that which is unassimilable into the perspective schema. (Damisch 2002: 14) In his system, the word cloud enclosed between forward slashes // signals its identification as a signifier; italics signal its use in a denoting capacity; and cloud is enclosed in quotation marks when it refers to that which is signified. The /cloud/ in renaissance paintings refers to the thing that interrupts a rational system and order, on both symbolic and actual levels. (Among others, Damisch references Correggio's *The Vision of St John on Patmos*, 1520-24, or Francisco de Zurbarán's *Vision of the Blessed Alonso Rodriguez*, 1633.) It heralds that which cannot logically be constructed within the grid of perspective and by definition subverts it, suggesting an alternative realm that remains resistant to ordering.

Using a semiotic approach to writing about painting—that is, religious painting for the book's majority—Damisch discusses adjacent "zones" (2002: 152) or spheres of experience. One could be said to exist within the everyday world, steeped in the tangible spaces and things of the environment around us. This is the world associated perhaps with the consecutive reasoning to which Keats took exception. (Keats 2014a: 69) Enmeshed in the relationship of signifier and signified, /cloud/ is representative of the transitional space between the consecutive world and, as Damisch describes it, another zone: the realm of the sacred, "a dimension of transcendence" (Damisch 2002: 145). "Not only does the cloud liberate those whom it supports from the laws of gravity, but at the same time it shows how profane space may open onto another space which imbues the former with its truth." Cloud represents "an irruption of otherness or of the sacred." (2002: 43, italics in original) It signifies a rent in the screen separating divine reality from the everyday. It is "an immediate manifestation of the sacred... that descends to share in the exile of human beings". (2002: 44) Rather than opening onto infinite space, linear perspective—whose horizon line and vanishing point(s) imply a realm beyond but serve to demarcate the visible limits of the rational—defines an "assured closure" (2002: 172). Space beyond remains unknown. /Cloud/ serves to disrupt this system and signifies a transition between realms. Moreover, if it is possible to put the

¹ Keats actually uses the word 'consequitive' when discussing the quest for truth: "I am the more zealous in this affair, because I have never yet been able to perceive how any thing can be known for truth by consequitive reasoning—and yet it must be—Can it be that even the greatest Philosopher ever arrived at his goal without putting aside numerous objections—However it may be, O for a Life of Sensations rather than of Thoughts!" (Keats 2014a: 69)

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religious convictions behind such paintings to one side, if it is possible to see /cloud/ in secular terms, can it be equated with the transition between a lived world and the space of imagination? Today's computer modelling systems can easily construct such fluid phenomena and represent them within the grid or matrix hinted at in paintings such as that by Lorenzetti. The sophistication and level of detail afforded by this technology is potentially without limit. Yet despite the calculability of such phenomena and their re-creation within the confines of the computer—and the increasing 'density' of this information, to use Flusser's terminology—a sense still persists of the unexpected, the unanticipated, or the unforeseen. A question poses itself. If /cloud/ can be assimilated within the codes of mathematical, programmable logic and according to the demands of a representational grid, are there still phenomena that resist modelling? Or is the level of understanding of material reality such that everything is now fair game for assimilation? Modern physics has mapped the world / universe / reality to such a degree of exactitude, of granular detail, that it remains far from possible that there are 'things' (in the broadest sense of the term) that escape rationalisation into a system. The scientific understanding of a phenomenon lies behind its eventual computability (Deutsch 1998) and it is likely that someone somewhere and at some point will formulate this or that understanding. So perhaps it is better to mull over the idea of /cloud/ more as a persistent trope than a physically tangible object; it is useful as a signification of the unassimilable.



Tim O'Riley, (still from) Figure of Eight, 2005–7 (digital animation, PAL, 20 second loop)

System / Apparatus

What follows is a brief exploration of Flusser's ideas concerning the image, the text, and the technical 'apparatus', which are useful when thinking about such tensions between the systematic and the thing that works against the system. When imagining, we step back from the world into ourselves, into what Flusser called a "nonplace". "When making a picture, we not only observe but imagine. We step back from the world into ourselves, into somewhere not so much a place as a nonplace. Our imagination is our capacity to withdraw from the world into that nonplace." (Flusser 1988: 14) We distance ourselves from the world we are in so as to comprehend better our 'context'. Pictures are a means of fixing the products of this withdrawal. They make them communicable and accessible to others. But pictures also serve to obscure the objects they represent (or at least they jostle with the world for our attention). A picture is (on the whole) formed on a surface over which the eye wanders as it pleases. It does not offer a conclusion but presents a wholeness, a synchronic totality that is animated by the observer. In this sense images are magical. They present states of things; they allow for contradictory interpretations; they present themselves before the thing they represent. If we step back from the world into ourselves in order to see our context, to see the wood in spite of the trees, in doing so we lose the specific nature of the thing. It becomes hidden by the image. "Images are meant for people to orient themselves in the world. But when they become very strong, people use their experience in the world to orient themselves in the image... An inversion of the relationship between the world of experience and the world of imagination is called idolatry." (Flusser 2005c)

Throughout his work, Flusser argues that this predisposition to imagine, to think in images, and to relate to the world through images was characteristic of a symbolic, magical consciousness radically altered through the invention of writing. In contrast to the image's open surface, the text necessitates the eye's direction along a path in order to receive a specific message. "Linear codes demand a synchronization of their diachronicity. They demand progressive reception." (Flusser 2002b: 39) This results in a new experience of time, a linear time as opposed to a circular, cyclical time. In his thinking, with the advent of writing, history begins and with it, the articulation and recording of (past) events. Like the image, the text also distances our relationship to the world but at a further level. Writing was developed to demystify the image, to determine it. In so doing, it too obscures the image embedded within it. The layers of mediation between world and subject proliferate and a progressive reliance on the text as a means of negotiating the world effects a shift away from idolatry to textolatry. Flusser cites an over reliance on scientific, religious or political doctrines as examples of this.

The victory of texts over images, of science over magic is not conclusive, however. The linearity of written language was too uncritical when applied to the rationalising functions of an emerging scientific approach. Therefore the bits or 'pixels' that constituted writing (that were torn from the image) had to be processed formally, they had to be calculated. Flusser saw calculation as the highest expression of historical consciousness. "Only an imagination that has been thoroughly calculated can be considered explained." (Flusser 2005a) Until Descartes, Newton and Leibniz, the numeric code remained tangled in the alphabetic code. Calculus was developed and refined in order to enlighten, to provide a surer means with which to grasp the world, to explain and further 'dis-enchant' the image. Mathematical notation provided a means of determining the nature of the world precisely and without ambiguity, but in time such 'texts' become abstract to a degree that they too further distance the world.

Flusser's book on photography introduces the principle of the 'technical image'. This is a key element of his philosophy, which he would later develop in relation to a broader conception of the notion of 'media'. (Flusser 2000) Scientific texts construct human perceptions such that a direct connection with the world becomes ever more tenuous. As a result, he determines that 'technical images', the first instance of which was the photograph, were developed in order to illuminate the abstractions embodied by such texts. Although one can without hesitation assert the importance of the pioneering photographers' visual ambitions, photography was in part a development of scientific knowledge (optics and chemistry). Earlier technical forms such as perspective are perhaps trickier to assimilate into this model. In this instance, the image is less the product of a system; a rational matrix of spatial ordering forms is only an aspect of the artist's representational lexicon—and significant to a greater or lesser degree depending on the particular artist in question. The development of perspective involved artists' visual experiments, observations and invention as much as it did a purely scientific approach to spatial configuration. Lorenzetti's gridded floor perhaps suggests a rationalising desire yet reflecting on it also raises the necessary interplay of practice and theory; the experience of making a painting is, after all, always in dialogue with notions or theories of how it can be put together, the motivations behind it, or its (critical) relationship to its context. Perhaps it was only later, as the techniques and theories of perspective became formalised did perspective's essence as a technical form become apparent. Moving forward to the second half of the 19th century and onwards to the present day, technical images (in the sense of an image-producing apparatus) begin to proliferate and as operators, producers and consumers of photography, film, television and video, and now digital images of all sorts, humans become functionaries of these 'apparatuses'.

This critique of photography is based on Flusser's picture of the shift from magical / symbolic thought through historical / linear thought, a thinking and consciousness effected through

writing, to a new image-based consciousness reliant on scientific, calculatory thought. The photograph owes its existence to such thinking but, true to its status as an image, that is, as a surface showing states of things, it acts as a transparent window onto the world. For Flusser this is a key moment. It signals a shift from a linear to an image code once again but this 'new' imagination is different from the one superseded by linear thought. The photograph freezes events into scenes, it effects the damming up of history. It signals the end of the dominance of linear, historical thinking. The photograph may appear to reflect the world directly. It has an indexical relation to the scene it pictures and the light or likeness it captures. But on the contrary, the vector of signification has reversed. For Ströhl, "photographs are post-historical because they do not find their origin in a process of abstraction, but go through a process of concretization." (Ströhl 2002: xxv)

The camera is a black box with input and output. Its inner workings remain unknown to its user, or indeed, this user may be removed altogether and the camera may automatically produce images. The black box is a place where processes occur that are both hidden from view and not visible, processes that rely on knowledge encoded as scientific notation. The camera's 'program' determines the nature of the images produced and as such, it programs its user. The photographer unwittingly becomes a function of the camera apparatus which itself is a function of a broader apparatus (industrial, economic, or political, for example). Those who program are themselves programmed by a meta-program of their apparatus, and so on: "Every program functions as a function of a meta-program and the programmers of a program are functionaries of the meta-program." (Flusser 2000: 29) The camera is an invention, a construct. It is the result of a train of thought that is conceptual, linear, and rational. Through this device, we create pictures of the world and they act like windows onto the world. But the pictures are a product of the camera; they are projected out from the camera onto the world. We begin to think and see in terms of the photographs and we perform our functions as operators of this system. For Flusser the importance of making this distinction was that as operators, as a matter of political and social necessity, we should attempt to work against the device: to program it rather than be programmed by it; to strive for the improbable as opposed to the probable.

The technical image—photographic, televisual, digital—replaces a symbolic, magical order with a programmed order. It is difficult to decode. An image constructed from scientific texts, its apparent transparency obscures the texts embedded within it. The image's users believe they see the world through the technical image rather than the apparatus that enables it. However, such images do not make these hermetic texts comprehensible but distort them by translating scientific statements and equations into states of things. By appearing to bring the world transparently closer yet paradoxically inserting a new layer of mediation, they change the experience of the world for its users. We have stepped still further away from the *lebenswelt*, the world in which we

live, into what Flusser referred to as a new imagination (Flusser 2002a; Flusser 1988; Flusser 2004).

But conversely, the world of technical images is as much instigated by us, and by extension through these apparatuses, as it is found by us. Worlds are initiated, created and projected rather than received and processed. Here the emphasis shifts away from the processing of external visual data, in a more or less automatic (programmed) sense, towards the projection of alternative worlds, towards a 'concretising gesture'. (Flusser 2002a) "The images created by the traditional imagination are two-dimensional because they have been abstracted from a four-dimensional life world. In comparison, the images of the new imagination are two-dimensional, because they have been projected from zero-dimensional calculations". (Flusser 2002a: 114)

In the nineteenth century, physical research into electro-magnetism opened up new territories for communication via the telegraph. Not only a new understanding of space but new possibilities for human relations emerged. (Standage 1998) The development of the digital computer is similarly indebted to knowledge of the behaviour of the unseen. But questions surrounding non-locality, observer relativity and representation that are inherent to modern physics also have a broader relevance to modern telematic and electronic societies: shortcuts multiply and physical distances seem to shrink still further through ubiquitous computing and communication devices. Digital processes universally accelerate the proliferation of images instigated by photography, film, and then television, just as these older, analogue media are qualitatively transformed via binary encoding. Thus the practice of intersubjective communication is revolutionised and refracted through networks of bits. The swarms of point-like bits that make up the digital domain are indescribable but nevertheless calculable.

To in-form is to materialise. Computer models are an embodiment of this process. They concretise. But we remain suspicious of such digital 'apparitions' as these are not found in the world but created by us.² Flusser, however, looks to physics as a means to invert the question: it is not so much that the artificial, technical forms are more or less real but that the idea of the real as a criterion for truth is itself problematic. If the world at the scale of the subatomic particle is constituted through relative collections of wave functions in a universal field of matter, the relative density of these accumulations determines what we experience as real. As the physicist Lev Vaidman states, "If a component of the quantum state of the universe, which is a wave function in the shape of a man, continues to move (to live?) exactly as a man does, in what sense is it not a man? How do I know that I am not this 'empty' wave?" (Bruce 2004: 236)

² As Friedrich Kittler puts it, any form of production is contingent upon hardware. "Any transformation of matter from entropy to information, from a million sleeping transistors, into differences between electronic potentials necessarily presupposes a material event called reset." (Kittler 1996: 333)

Approximately 26.8% of the universe is presently conceived of as 'dark matter', 4.9% baryonic or ordinary matter (the things that can be sensed), with 68.3% determined to be 'dark energy'. Given how extensive the universe is, the fact that there is 'stuff' existing in the unaccountably vast spaces between stars and galaxies perhaps seems inevitable. Does this stuff metaphorically occupy the same space that / cloud/ inhabits?

Field, Sea, Sky

It goes without saying that changes in knowledge since linear perspective was developed—or rediscovered—centuries ago have been truly seismic. (cf. Edgerton 1975) Perspective is just one of the many things that have contributed to the 'modern world'. Without veering somewhat off course it is not feasible to discuss here contemporary understandings of space, matter, energy, or time, save to say that the 'grid' of perspective could be said to have been absorbed into (the notion of) a connected field of points or nodes. Space does not exist simply as an empty vessel: things define the space in which they are situated and space defines those things in turn. They cannot be separated. Moreover, if like matter, space itself has a grain—a discrete quantum structure—the relative distribution or dispersal of particles, the 'stuff', that makes up the entirety of the physical world / universe occurs within a connected 'field'. What is referred to as 'matter' or 'space' is a relative agglomeration in the density of this field. An entity is constituted from parts that connect it with its surroundings; a thing is an amassing or coalescence in the field.

Flusser's essay 'The City as a Wave-Trough in the Image-Flood' provides a brief reflection on the nature of the city seen less as a physical space than as a formation of networks of connections between people, and, written before the development of the world wide web, it hints at a world to come where humans are immersed in waves of data, awash with images and information. (Flusser 2005d) Again using metaphors from the world of physics to express the connections between people, Flusser describes gravity wells (climbing out of one gravity well, the Earth's, one falls into the Sun's or Mars'), nets of space in which matter collects, "the image of the city as a field of flections" (Flusser 2005d: 323), and so on. He asserts that through dialogue—through the net of relations one has with one's fellow human beings—an aspect of oneself emerges.

These aspects Flusser associates with "masks" and the city is a "mask rental shop", where one adopts different selves according to different contexts. The self is less a kernel, an irreducible nub (a kernel is also a fundamental part of a computer's software, one that negotiates between the CPU or memory and its applications, for example), than a shell, a net of relations, the threads of which are channels through which information flows. "If one holds fast to the image of an intersubjective field of relations—we is concrete, I and you are abstractions of this—then the new

image of the city gains contours." (Flusser 2005d: 325) The denser the net, the more concrete are the relations between humans: "These dense places develop into wave-troughs in the field that we must imagine as oscillating back and forth." (Flusser 2005d: 325-6) Going on to talk of a "Project of Projections", he muses over the un-geographically locatable nature of the city as, rather than bricks and mortar, it is more the place "where humans open up to one another" and this place can be anywhere. (Flusser 2005d: 327) To draw on the water motif, if the image is thus immersed and by extension, necessarily connected to its onlookers but where the distinctions between things are blurred, can we see /cloud/ as embodying this uncertainty?

"The real is surrounded by the possible like an island by the ocean. We live on the beaches of the real." (Flusser [2723]: 1)

Thought as expressed via language—that is, language in a broad sense, encompassing text, mathematical calculation, coding, and so on—could in one sense be seen as like a net cast out into the ocean. The lines of the net correspond to language and the fabric signified by its weave corresponds to the measure we have of the world. Its intersections, its knots or nodes, coincide with what is habitually referred to as real or actual. The net is also mutable; its form and extent can shift depending on the questions asked. Taking the metaphor a stage further, it may be worth taking account of the water, the ocean, in addition to those things that it 'contains'. The net could be redefined in relation to the field in which it is submerged. Rather than being a substance fundamentally different to its surroundings, it is seen as being of the same materiality though differentiated in terms of its material density. Rather than a discrete entity within a sea of data, for example, perhaps it can be seen as a floating intersection, more or less dispersed within this medium.

The ineffable—perhaps embodied in the notion of /cloud/—is that which escapes language, that which is free to float through the gaps between the net's nodes or intersections. According to Flusser's thinking, the more tightly woven the net, the closer together those nodes, and the more extensive our comprehension of the world. As a result we become more distanced and separated from the world. In this sense the 'world' we inhabit with this knowledge is constructed though language and the limits of language become the limits of this world. Does /cloud/ slip through this increasingly fine mesh or is it somehow always *within*—intrinsic to—the substance of matter, filling the field of actuality as a 'fractal form'? Science tries to capture the world through its description and yet one of the peculiar observations that modern physics yields is the immensity of the (relative) spaces between objects at minuscule scales.

A productive incompleteness

The quest for the sublime in the everydayness of things—and the irony of this quest within a modern, technological world—is tinged with melancholy perhaps owing to the futility of this search or the exponential growth in attempts to record the transience of experience via (social) media. Between the fact of the image and the fact itself—the world—exists a space perhaps characterised by loss. Attempts to subjugate the image by text, for example, by locating it within the parentheses of metadata will likely be unending. Great strides have been made in image recognition but the dominance of text over image in terms of the former's 'search-ability' perhaps points to the practical issues involved, as we inhabit a system that is dominantly constituted through the logic embodied by text. But enmeshed as it is in a net of description, the image still resists. Just as the cloud in the sky invites one to become lost in speculation, the image can conflate perception and reverie.



Tim O'Riley, Speculative Object (#10), 2011 (sign paint, spirit level, length 101 cm)

Given science's meticulous knowledge about fluid dynamics and the physical makeup and behaviour of states of matter, a model of literal cloud can now be computed, embedded in code. In terms of an image or model of such phenomena, the cloud becomes absorbed into the system. Yet, within this system, is there not a possibility of the disruption or aberration that /cloud/ may

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still represent? Ideas revolving around chance, doubt, uncertainty, or the unanticipated spring to mind; an imagination embedded in a systematic process can potentially insert the unforeseen or intractable into the system. It could use the system's rationality to disrupt itself: to transcend reason by rational means. Prioritising laterality over linearity, the (technical) image can be read in multiple ways and directions. If the idea of /cloud/ has traction in the sense described, embedding uncertainty within the system—giving space for action—makes computed forms potentially liberating. Moreover, image-making could be seen to offer provisionality as a virtue by its anticipation of a person mulling or ruminating over, addressing, seeing the image in multiple ways, or 'reading' it from different directions. One finishes a sentence implied by the image (or for that matter, perhaps another sentence entirely, one tangentially prompted by the image). It is necessarily incomplete. The benefits of being in a state of uncertainty and inhabiting doubt—Keats' negative capability—encompass not only the artist but also the viewer. (Keats 2014b: 78-9) This is also true of similar dualities such as producer / consumer or writer / reader. And if we agree with Marcel Duchamp's famous assertion that "the spectator makes the picture" (Duchamp 1975: 105) and thus that these dualities are open to question, the provisionality heralded by /cloud/ and by the nature of the (technical) image can problematise, confound, or even offer an antidote to the systematising drive in this mediated world.



Bisected boat, London, 2016 (photograph | Tim O'Riley)

References

- Bachelard, G. (1988). Air and Dreams: An essay on the imagination of movement, (Farrell, E.R., Frederick Farrell, C. trans.), Dallas: Dallas Institute Publications, Dallas Institute of Humanities and Culture.
- Bruce, C. (2004). Schrödinger's rabbits: The many worlds of quantum, Washington, DC: Joseph Henry Press 2004.
- Damisch, H. (2002). A Theory of /Cloud/: Toward a History of Painting, Lloyd J. (trans.), Stanford: Stanford University Press.
- Damisch, H. (1994). The Origin of Perspective, Cambridge, Mass. & London: MIT.
- Deutsch, D. (2001). The Discrete and the Continuous. In: The Times Higher Education Supplement, 5th January 2001. [Also retrieved 11th August 2016 from:
 - http://www.daviddeutsch.org.uk/wp-content/DiscreteAndContinuous.html]
- Deutsch, D. (1998). The Fabric of Reality: Towards a Theory of Everything, London: Penguin.
- Duchamp, M. (1989). The Creative Act. Text of a talk given to the American Federation of the Arts, Houston, April 1957 re-printed in: The Writings of Marcel Duchamp, Sanouillet, M. & Peterson, E. (eds.), New York: Da Capo Press: 138–140.
- Duchamp, M. (1975). Duchamp du Signe Paris: Flammarion.
- Edgerton, S.Y. (1975). Renaissance Rediscovery of Linear Perspective, New York: Basic.
- Flusser, V. (2002a). A New Imagination. In: Writings, Ströhl, A. (ed.) & E. Eisel, E. (trans.), Minneapolis/London: University of Minnesota Press: 110–6.
- Flusser, V. (2004). A New Imagination. In: Vilém Flusser's Conception of Art, UNESCO DigiArts online seminar on art and new media. Barcelona, Spain, 1st November 2004. [retrieved 11th August 2016 from http://portal.unesco.org/culture/en/ev.php-
- URL ID=35979&URL DO=DO TOPIC&URL SECTION=201.html]
- Flusser, V. [2723]. Between the probable and the impossible. An unpublished manuscript in the Vilém Flusser Archiv, number 2723, (date unknown).
- Flusser, V. (1988). Curie's Children: Vilém Flusser on Discovery. In: Artforum, vol. 26, April 1988: pp14–15.
- Flusser, V. (1996). Digital Apparitions. In: Druckrey, T. (ed.), Electronic Culture: Technology and Visual Representation, New York: Aperture: 242–5.
- Flusser, V. (2005c). My own transcription of an audio recording of Flusser. In: online Flusser seminar hosted by MECAD /_vilem_flusser_archiv [retrieved 15th March 2005 from http://217.76.144.67/unesco/intro/index.html link no longer functioning].
- Flusser, V. (2005d). The City as a Wave-Trough in the Image-Flood, Gochenour, P. (trans.). In: Critical Inquiry, 31, Winter 2005: 320–328.
- Flusser, V. (2002b). The Codified World. In: Writings, Ströhl, A. (ed.) & E. Eisel, E. (trans.), Minneapolis/London: University of Minnesota Press: 35–41.
- Flusser, V. (2005a). Thought and Reflection. In: Flusser Studies. 1. November 2005 [retrieved 30th November 2005 from
- $\underline{http://www.flusserstudies.net/sites/www.flusserstudies.net/files/media/attachments/thought---reflection 01.pdf \#].}$
- Flusser, V. (2000). Towards a Philosophy of Photography, Von Amelunxen, H. (Intro.) & Mathews, A. (Trans.), London: Reaktion.
- Gombrich, E.H. (1993). Art and Illusion: a study in the psychology of pictorial representation, London: Phaidon.
- Keats, J. (2014a). Letter to Benjamin Bailey, 22 November 1817. In: Selected Letters, Barnard, J. (ed.), London: Penguin: 68–72.
- Keats, J. (2014b). Letter to Benjamin Bailey, 21 December 1817. In: Selected Letters, Barnard, J. (ed.), London: Penguin: 78–9.
- Kemp, M. (1990). The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat, New Haven & London: Yale University Press.
- Kittler, F. (1996). There is No Software. In: Druckrey, T. (ed.), Electronic Culture: Technology and Visual Representation, New York: Aperture: 331–7.
- Kubovy, M. (1986). The Psychology of Perspective and Renaissance Art, Cambridge & New York: Cambridge University Press.
- Pirenne, M.H. (1970). Optics, Painting and Photography, Cambridge: Cambridge University Press.

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- Shearman, J. (1992). Only Connect... Art and the Spectator in the Italian Renaissance, Princeton, New Jersey: Princeton University Press.
- Standage, T. (1998). The Victorian Internet: the remarkable story of the telegraph and the nineteenth century's on-line pioneers, London: Bloomsbury.
- Ströhl, A. (2002). Introduction. In: Flusser, V. Writings, Ströhl, A. (ed.) & E. Eisel, E. (trans.), Minneapolis/London: University of Minnesota Press: ix–xxxvii.

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