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Epistemic Function and Ontology
of Analog and Digital Images

Aleksandra Łukaszewicz Alcaraz

Abstract
The important epistemic function of photographic images is their active role in construction and reconstruction of our beliefs concerning the world and human identity, since we often consider photographs as presenting reality or even the Real itself. Because photography can convince people of how different social and ethnic groups and even they themselves look, documentary projects and the dissemination of photographic practices supported the transition from disciplinary society to the present-day society of control. While both analog and digital images are formed from the same basic materia, the ways in which this matter appears are distinctive. In the case of analog photography, we deal with physical and chemical matter, whereas with digital images we face electronic matter. Because digital photography allows endless modification of the image, we can no longer believe in the truthfulness of digital images.

Key Words
anthropology, indexicality, ontology, phenomenology, photographic practices, realism, structuralism

1. Introduction

In this paper I focus on two kinds of photographic images: analog imagery, which is a specific kind of technical image connected to our reflections on reality itself because of its physical and chemical properties; and digital imagery, which does not support belief in the reality underlying it. Although as phenomena, analog and digital images seem to be very similar or even the same, when perceiving a digital image we can never be sure that it is true. I consider these two kinds of photographic images on the ontological and on the epistemological level and show how they influence the form and structure of our worldview, our consciousness and self-consciousness and, most fundamentally, how they influence our identity. I begin by explaining the epistemic function of the photographic image.

The epistemic difference between analog and digital images is related to the difference in material and hence derives from an ontological difference. Compared to the forms and structures introduced with the analog photographic image, digital images can change our worldview, our consciousness of the world, and our sense of self. They also can change our views on the subject, identity, and social, political, and economic relations. Analog and digital images, however, share one attribute: they both strongly influence human understanding and experience.

2. Anthropological epistemology

The epistemic function of photographic images, both analog and digital, is one of many derivatives of the general impact of

images on human beings. Since Plato, cognition has been one of the well-recognized functions of images, a functionality developed through empiricism, Hegelian idealism, and twentieth-century Foucauldian structuralism. I suggest that a fruitful way of understanding this function, and the impact that images have on our knowledge and on our consciousness, is presented in Hans Belting's *An Anthropology of Images* (*"Bild-Antropologie"*).[1] Belting proposed that this sub-discipline should be regarded as a theoretical field and treated as a kind of reflection focused on images and pictures. In his opinion, such an anthropology of images should be looked at from neither an historical nor technical point of view but as existing somewhere among ethnology, philosophy, and art history. Its interdisciplinary character allows us to get closer to the multi-layered function of images and pictures. Belting's theoretical inspirations come from the writings of David Freedberg and Georges Didi-Huberman, two scholars who straddle the thin line dividing art history, philosophy, and ethnological studies.[2] Belting, occupied with image in a manner similar to anthropologists and art historians, has conducted broad and deep archival research on different kinds of pictures or images. (In German, as in Polish, there is just one word for image and picture: *das Bild* in German and *obraz* in Polish, which complicates an analysis.)

Belting claims that the human body is the basic medium of the image: we carry images in our bodies, sometimes we externalize them in different visual forms, and we take them into our bodies through perception. Although an image can be embodied in media such as painting, photography, or sculpture, the basic medium of this image is the human body of the artist and of viewers. Belting understands a human body as a "living medium" that produces, perceives, and remembers images, which are different from the images we encounter through handmade or technical pictures. The body is thought of as a medium between the world and the mind: we perceive an image through our senses and remember it through the neural paths that carry the sensed image into the place in the brain where memories are stored. The human mind is a defined place in the world, that place where images are produced and recognized.[3]

Belting's view on images presents a broader anthropological understanding of our interactions with images. Referring directly to photography, he reckons that the "modern history of a body is repeated in an unique way by the *history of modern photography*"[4] because photography "talks" about a body by documenting it and presenting it. We, while being photographed, are changed into an image even before the photograph is taken. We internalize images that we see and conceive as reliable, including images of ourselves. We incorporate these images into our mind's eye and enact them, making them real by our actions and practices. We serve as their embodiment. We perform according to our perceptions of images of ourselves and of the world. An image is an embodied medium, although the media may be varied materials. Belting understands an image to be three-dimensional, with material, sensual and mental attributes, and presents it as a triangular relation between medium-image-body.[5] That triangle points at an ambiguity of the relationship between body and image because the mediation

of the third element, a material medium, is necessary for any perception. One image can inhabit various bodies, changing and transforming them.

Belting describes the beginnings of the impact that images have had on people, focusing on various interactions between images and individuals and between images and social groups. Anthropological epistemology can be understood therefore as a useful tool to understand the phenomena of images, since it takes into consideration their cultural, historical, social, and ethnic characteristics, as well as their surroundings. This anthropological perspective returns human beings to their rightful place as active participants experiencing themselves in media form. In this way anthropological epistemology differs from other theories of media and analyses of techniques, as in this kind of epistemology the human being is presented not only as a user but also as the inventor of new techniques.[6]

3. Analog photographic images and their indexical character

What is the epistemic function of photographic images? In general, such images play an active role in the construction and reconstruction of our beliefs concerning the world and human identity. This function differs in the cases of analog and digital photographic images. Analog images are older, with a history that, with its beginnings in 1839, accustoms us to perceive them as presenting reality, or even the Real itself, because of their physical and chemical matter. That the world passing in front of the camera leaves a print or a trace would not be obvious if the matter composing analog photographic images were different. Looking at analog photographic images, it seems obvious that "something was there," since the trace left by light touching the surface of photosensitive paper attests to it.

Charles Sanders Peirce was correct in his recognition of the indexical character of analog photography. An index is a sign influenced by its object, a natural and obvious sign that is a material effect of certain phenomena. Peirce himself used photography as an example of an indexical sign. The material light leaves a trace on certain physical and chemical matter, and this is the moment of indexicality in photography.

> Photographs, especially instantaneous photographs, are very instructive, because we know that they are in certain respects exactly like the objects they represent. But this resemblance is due to the photographs having been produced under such circumstances that they were physically forced to correspond point by point to nature. In that aspect, then, they belong to the second class of signs, those by physical connection.[7]

We cannot say, however, that an analog photograph is a faithful and reliable representation of reality as it actually is, lacking any contribution from the human hand and eye, although this is a familiar perspective in both common opinion and philosophy. In my view, the most common mistake in reflections on photography is caused by confusing the indexical

character of an analog photographic image with its meaning, with its Icon. Indexical character is extremely important and should be understood as pointing to The Real and at the real existence without stating anything about it, in the sense that Peirce described it:

> Even what is called an 'instantaneous photograph`, taken with a camera, is a composite of the effects of intervals of exposure more numerous by far than the sands of the sea.[8]

This perspective is consistent with Peirce's semiological concept that signs refer to other signs within a web of relations but finally lead to "the thing in itself," which takes the form of the Firstness: nameless, incomprehensible, and manifesting only in "uncontrolled variety and multiplicity."[9] Thus Firstness cannot have any direct iconic representation. It follows that there is no direct representation of the world, and even photography, with its specific imagery, cannot assume that role. Photography points at reality but its indexical character does not extract the one and only truth on its iconic level. Many theorists confuse indexical and iconic levels, which is the main reason for misunderstandings concerning the "realism" of photography. "Realism" in photography should be understood as an approach to objects in photographs as being "like this," a mode of presentation that is historical and has a well-defined function. This perspective has become more common with the appearance of various possibilities of altering an image, and with digital images.

Realists approach photography as "natural" language: a transparent medium of representation in which the matter of analog photographic images is physical and chemical, consisting of light and chemical components. This approach appears in numerous theories presented by different philosophers and theoreticians. Among them is Roland Barthes.

3.1 Roland Barthes on the ontology of analog photography

Roland Barthes can be seen as a post-structuralist, although he admitted that in his writings about photography he turned to phenomenology, connecting photography firmly with memory and the past as disclosed by means of this special medium. He searched for the essential truth of photography and found it in the revelation of "this-has-been," which connects appearance with essential meaning; he stated that the photograph always carries its referent with itself, that is its referent is present on the photograph. This theoretical step can be understood psychologically. Grieving for his dead mother, he yearned to keep past reality alive. A photo taken in the winter garden, representing Barthes's mother as a five-year-old girl, gave him that experience.[10] This belief in the real person present on the photograph is possible only when physical and chemical matter becomes glorified as truth or life-giving.

Barthes, in *Camera Lucida,* a book dedicated to photography, distinguished two planes of an image. 'Studium' is the meaning of a photograph or what we can learn from it. 'Punctum' is that aspect of a photo that is subjective or personal: it can be fixation on a detail and intensive (the Time

passing.)[11] Punctum's function is confirmation of reality, a confirmation that is unique to each viewer and is impossible to communicate in the generalized manner of the socially encoded studium or even to be expressed in language. Intensive punctum is the passage of time, the past-present, which Barthes defines as the time of photography.[12] By recording that which is in the past, what was "real," secures the stability of its being and fixes death, which will inevitably come to the represented being. Formal punctum, understood as a detail, grabs our attention and causes the immobile image on a wall to transcend itself, pointing at the life "out there."[13] It admits the existence of the pictured being outside the frame and its continuation outside the frame of representation. Punctum is an element of the image situated out of the visual layer of social code, certifying the essential similarity between the image and reality.

3.2 Analog photographic images: the function of realism

At the beginnings of photography not everyone accepted the belief that analog photographic images faithfully represented reality. Eugene Delacroix, who used photographs for sketches in his paintings, stated that photography cannot transmit the truth of the reality because it is too accurate, and truth emerges from selection and synthesis. According to Delacroix, photography is like a dictionary of nature that shows everything because of its literal accuracy.[14]

The belief that truth is transmitted by a photographic image was confirmed by tribunals, which started to use photographs as evidence, as John Tagg reminds us in *The Burden of Representation: Essays on Photographies and Histories.*[15] Photographic images have been attributed by particular individuals and social groups as proof attesting to their versions of truth. Photographs were to document society and each of its members. What is interesting is that

> [t]he early years of the development of the photographic process coincided approximately with the period of the introduction of the police service into this country, and for more than a hundred years the two have progressed together….The value of photographs for the purposes of identification was realized by the police at a very early stage.[16]

Alphonse Bertillon, for example, photographed criminals for the Prefecture of Police in Paris, and various unknown photographers took pictures for the police in Birmingham in the 1850s and 1860s (these photographs are kept in The West Midlands Police Museum). Other photographers shot pictures of patients in asylums and hospitals.[17] Photographs entered various types of archives in public institutions[18] and ultimately became a part of identity cards. The accepted belief that photography is realistic also helped to make it a scientific tool in ethnological studies, as societies previously unknown to Europeans were described through the analogical medium. Moreover, analog photography was convincing to its audience about the way the world looked, how different social and ethnic groups looked, and how they themselves looked. The use of and discussion about photography in many documentary projects (e.g., by Nadar (Gaspard-Félix

Tournachon), Bill Brandt, August Sander, the Farm Security Administration) slowly spread through modern society, becoming popular, cheap, easy, and increasingly commonplace.

Analog photographic practices of the nineteenth and early twentieth centuries strengthened the positivist, industrial, rationalistic paradigm. This process is now being analyzed by poststructural theorists such as André Rouillé, who points at the symbolic role of images in rushing transformations in time, space, and communication towards industrial society. Rouillé explains that the analog photographic image appeared during a "crisis of truth," when veracity had been weakened and, after the Romantic period, doubt in objectivity appeared. This was a time of important social and political changes connected with industrialization and the abandonment of traditional monarchies. The large migration of nondescript common people, moving from the countryside to the cities, and the subsequent changes in urban power relations, demanded new forms of representation. Photography answered this demand perfectly, offering a scientific, machine-like method of representation. Photographs were easy to produce and credible because of the apparent lack of an individual's subjective influence on the form of an image.[19] Moreover, analog photography played an historical role in the establishment of a new social and epistemic order, since these two realms are closely bound by commonly shared belief systems concerning the world.[20]

Rouillé asserts that photographic characteristics, like instantaneity, automaticity, speed, and repeatability, influenced culture. Tagg questions why photography so deeply influences our lives both as individuals and as a part of certain communities. He constructs his answer from the Marxist thought of Louis Althusser, who held that an individual was largely defined by structures and systems (what he termed the Ideological State Apparatuses), among which he included media and education.[21]

One's concept of self is therefore a subjective identity, a subject or product. Atlhusser's theory of ideology distinguished the repressive and the ideological, both of which influenced the concrete activities of identifying oneself, of doing things: "an ideology always exists in an apparatus, and its practice, or practices. This existence is material."[22] This is the embodiment of the ideology. Tagg further uses Althusser's interpellation to examine the power that photographic images have to make us identify with our photographic effigies.

4. Transformation of photographic practices through digital processes

The thorough spread of photographic practices, now almost universally accessible to groups and individuals, contributed to the rise of modern, disciplinary society, defined by Michel Foucault as a society in which power is internalized. As monarchies and their absolute power declined and societies moved towards democracy, there appeared a need for a new kind of disciplined body, one with internalized rules. Photography was involved soon after its invention, a process described in *Discipline and Punish: The Birth of the Prison* by

Foucault.[23] It helped define identities by depicting different social classes (e.g., the work of Nadar and Bill Brandt), races (in many documentary projects of various colonial empires), ethnic groups (e.g., the photographic records of Nazi-era Germany), and socially-constructed gender roles (e.g., popular fashion photography).

The technical means, knowledge, and materials of early photography were privileges limited to specialists, often as representatives of public institutions. However, when Kodak invented a cheap, handy camera,[24] the apparatus became accessible to everyone, from professionals to laypersons. The power to document and record was no longer controlled, but took on a democratic form: photographic documentation spread the power of photography to a much broader segment of society. When anyone could take a photo, individuals started to believe that they could present themselves autonomously. They were, however, subjecting themselves to a well-defined system of representations.

Tagg, using the work of Althusser and Foucault, shows photographic practices of documentation as dispersal tools used to diffuse power within societies. He locates photographic practices in the realm of Althusser's Ideological State Apparatuses, slowly, imperceptibly, and visually cooperating in the processes of subjection and repression, by creating images in which we believe. We believed in photographic images even more once Kodak cameras became widely owned, because we personally executed them and we wanted our acts to be perceived as independent and autonomous.

Following the line of analysis started by Tagg, we can go on reflecting contemporary Individual photographic practices that became even easier and more fun after the advent of the digital apparatus. We obtained digital cameras, which we use to take digital pictures all the time and then share them with others via social media. We can observe in these practices a certain transition in the function of photography: it has shifted from an emphasis on defining social groups to one of defining individuals. There has also been a shift from the necessity of one's signature (made by light passing in front of photosensitive material) to a numeric/digital representation, open to variations and modifications. Analog photographic images had a confirmed rational identity represented by means of a geometrical perspective, precisely putting the individual (as belonging to a certain social group) in the world. Digital photographic images, on the other hand, work for a proliferated identity, detached from the assumed ground, multiplying, relational, and variable. Contemporary individuals, deprived of determinate essence, see themselves differently from how people saw themselves before; the contemporary world is understood as a system of interconnections rather than as a hierarchy. Conjoined in a relationship defined by a social context, the world relatively independent of the camera is seen no longer as the subject of the digital image.

Contemporary society, as Foucault described it, is not disciplinary anymore. Today's digital, modular society is not a hierarchy but a web, and the structures of power are even

more invisible. Machines do not determine the type of society but, as Gilles Deleuze pointed out, "types of machines are easily matched with each type of society."[25] Deleuze called this "the society of control,"[26] arguing that, from a historical and technical perspective, in such a society masses are not important anymore. Masses are closed in factories, schools, hospitals, prisons, or families.

Only the individual is important, or rather his or her numeric representation. Living in the virtual world of digital photos, digital data, digital work, social contacts, and digital money, all of which are controlled in innumerous repects, we leave traces that are recorded. This situation is the most perfect form of the Panopticon, the system of constant one-way vigilance over nearly every aspect of human life that Jeremy Bentham presented in "Panopticon; or The Inspection-House: containing The Idea of a New Principle of Construction applicable to any Sort of Establishment, in which Persons of any Description are to be kept under Inspection."[27] Such surveillance is no longer limited to prisoners, the ill, and disadvantaged individuals mentioned earlier; the watchful system is now present in all aspects of modern society.

Foucault and Deleuze argued that representations are not of an independent reality but are dictated by social, economic, and political institutions. Therefore, people were wrong in thinking that what the analog camera captured was an independent Real; it is a visual tool for creating images that aid the processes of social self-definition and of defining one's individual identity. With the advent of digital representations, which can be manipulated not only by the unseen institutions of power but also to a more limited extent by individuals, the hierarchical system in which institutions of power dominated life dissolves into a system structured as interconnections among individuals.

5. *Ontos* **and the epistemic role of digital photography**

Although digital photography has become ubiquitous, it differs from analog photography not only because of its availability, cheapness, and omnipresence. We can no longer believe in the truthfulness of digital images, since we can never be sure to what extent they represent the world around us, our selves, or whether they might be simulacra. This is not only because we can easily alter digital images, since analog photographic images have been manually altered, retouched, and recombined since the very beginning of photography, as it was explicit for example in techniques used in the area of pictorialism at the transition from nineteenth to twentieth century, or in constructivist and surrealist photomontage of 1920s and 1930s of the twentienth century. I think that there is another important factor at work here: we have lost faith in the existence of the world underlying the image, the Real itself.

As Jean Baudrillard would say, we became agnostics about reality28 and one has to bracket one's belief in reality, as Edmund Husserl advised us to do.[29] While analog and digital images are formed from the same basic matter, the ways in which each appears are different: analog photography deals with physical and chemical matter whereas digital images are electronic. This difference affects the epistemic

function of such images. We can no longer believe that "something was there," or that a certain part of reality has appeared at a certain time and was imprinted upon photosensitive material. The digital image is flat, not three-dimensional. It can be modulated but it cannot reach underlying material and therefore cannot touch reality. It plays with visuality, so that we cannot be sure about its veracity, and in place of objectivity we obtain only something subjective. We realize that we never truly perceive reality as such but always "as if." We cannot touch the numerical, fluid matter that appears to us visually, so that we cannot confirm the knowledge obtained and proclaim its objectivity.

6. Conclusion

All images and signs created and used by people have an epistemic function, although forgetting about the epistemic dimension of images has a long tradition. This tradition was initiated by classical aesthetics, which concentrated on the aesthetic aspects of pictorial works and on their emotional potential. The social atmosphere accompanying the rise of classical aesthetics in the mid-eighteenth century aided such an attitude: Alexander Baumgarten, with his treatise *Aesthetica*, defined a new, wider theory of aesthetics as the study of interconnected beauty and art. Baumgarten and Charles Batteaux defined liberal arts by their common characteristic, their Beauty. Beauty was to be recognized by means of the educated viewer's disinterested contemplation of artistic subtlety, refinement, harmony, and the sublime. The connection between social structures and discourse on art was made explicit in the case of eighteenth-century contingencies between the roccoco in painting, interior design, sculpture, music, and the feudal structure of European societies before the French Revolution.

The compatibility of this kind of philosophical, idealistic reflection and the ornate classical style in favor at the time can give us a deeper insight into aesthetic analysis. Batteaux, Baumgarten, Burke, and Kant were writing in the last years of European aristocratic ascendancy, before the beginning of the drive towards democracy. One might consider how social structures and classes were depicted in European paintings in those years. In France, for example, Antoine Watteaux painted in the new style of *fête galante,* depicting pleasure-seeking activities of elegant young men and women in parks and gardens. In Prussia, Frederick II constructed aristocratic architecture, including a royal library and cathedral. In England, Thomas Gainsborough and Joshua Reynolds depicted charming British aristocrats strolling on their properties or relaxing in famous resting places. The essence and structure conveyed by these works forces us to scrutinize their epistemic dimensions and therefore the class character of artistic expression as the link between a kind of social structure and the artistic images created within it.

André Rouillé documents the ways in which present-day society and the popularization of photographic images coincide. The essence and structure of society presented as "truth" are evident in Nadar's photographs of Paris bourgoisie, August Sander's documentations of pre-Nazi Germany, Bill Brandt's studies of class divisions in Great Britain, and

photographers working within the U.S. Farm Security Administration (FSA) program during the Roosevelt administration, all of which demonstrate the overlap of social structures and artistic creation.

Plato clearly recognized the epistemic role of the image, even though he opposed this form of expression because of its imperfect character. He understood image as merely an imperfect reflection of reality and ideas. Because erroneous interpretations have effects, the influence of images upon society should be restricted.

The epistemic role of images consists in co-creating our convictions and beliefs about the world and ourselves. Epistemology, as the study of cognition, is an historical science that deals with historically shaped and conditioned belief systems. Epistemology's historicity, considered from the point of view of Foucault's archaeology and genealogy rather than from that of history, can be understood as a necessarily expanding sequential order, sprouting out of its essential critical role. From a genealogical point of view, Foucault, in *The Order of Things*, showed how changing historical conditions and not transcendental forms explain the changing forms of social order,[30] while in an archaeology explains the broad episteme underlying and it.[31]

Epistemology reveals the non-necessary and non-universal character of any belief system and proves that such beliefs are not rooted in metaphysics. If there are no universal truths to be found and truth is relative to an historical era (as belief systems are), then belief can become knowledge only as an ironic, suspended, "as if" probability.

One should consider the epistemic dimension of digital images and their matter as part of the study of contemporary knowledge. Such images reflect the form of our world's existence as an audiovisual space-time continuum. Digital images are how we currently access the world, and they have in a considerable way transformed the real world into a virtual pictorial one. This is in part because we take pictures of something, which we can then manipulate indefinitely. Such manipulations by the individual photographer, rather than the application of Kantian categories of the human mind, impose an order on the indeterminate matter of the world. As the certitude that the world actually looks the way it is portrayed is taken away, we again have to face the problem of radical Cartesian skepticism -- the Cartesian method in which only doubt and the doubting subject remain. It is not an accident that the movie *The Matrix* introduced a thought-experiment referring to Cartesian doubt. What if the human brain was enclosed in a glass jar and stimulated, such that one had the mere impression and consciousness of the continuity of one's existence? Would such a brain have tools allowing it to gain awareness about its actual state of being kept in a jar and being subjected to suitable stimulation? There is no way to tell whether we live in a world or a simulacrum of one. Such an interpretation of reality opens up a wide space allowing a boundless expanse for the human imagination.

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Endnotes

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[1] Hans Belting, *Antropologia obrazu. Szkice do nauki o obrazie*, (Polish edition of *Bild Antropologie. Entwürfe für Bildwissenschaft*), (Cracow: Universitas, 2007), p. 8. English translation, *An Anthropology of Images: Picture, Medium, Body* (Princeton: Princeton University Press, 2011).

[2] *Ibid*., pp. 7-9.

[3] *Ibid*., p. 72.

[4] *Ibid*., p. 134.

[5] *Ibid*., pp. 11-69.

[6] *Ibid*., pp. 17-18.

[7] Charles Sanders Peirce, *Collected Papers of Charles Sanders Peirce, Vol. 2, Elements of Logic*, Eds. Charles Hartshorne and Paul Weiss (Cambridge: Harvard University Press, 1932), pp. 159, 281.

[8] *Ibid*., pp. 267, 441.

[9] Charles Sanders Peirce, *Collected Papers of Charles Sanders Peirce, Vol. 1, Principles of Philosophy*, Eds. Charles Hartshorne and Paul Weiss (Cambridge: Harvard University Press, 1931), pp. 148-149, 302:

> The idea of Firstness is predominant in the ideas of freshness, life, freedom. The free is that which has not another behind it, determining its actions; but so far as the idea of the negation of another enters, the idea of another enters; and such negative idea must put in the background, or else we cannot say that the Firstness is predominant. Freedom can only manifest itself in unlimited and uncontrolled variety and multiplicity; and thus the first becomes predominant in the ideas of measureless variety and multiplicity
> (pp. 148-149).

[10] Roland Barthes, *Światło obrazu. Uwagi o fotografii*

(Polish edition of *Camera Lucida: Reflections on Photography,* (Warsaw: Wydawnictwo KR, 1996), pp. 118-121.

[11] *Ibid*., pp. 160-161.

[12] *Ibid.*

[13] *Ibid*., p. 98.

[14] For more information see: Eugene Delacroix, "Le dessin sans maître, par Elisabeth Cave," *Revue des deux mondes*, 20 (1850), 1139-1146, or in: B. Stieger, *Bilder der Photographie. Ein Album photographischer Metaphern,* (Frankfurt am Main: Suhrkamp Verlag, 2006).

[15] John Tagg, *The Burden of Representation: Essays on Photographies and Histories* (London: MacMillan, 1988).

[16] *Ibid*., p. 74.

[17] *Ibid*., pp. 77-81. Tagg mentions Dr. Hugh Welch Diamond, who used photography in his work at the Female Department of the Surrey County Lunatic Asylum. He also lists others (after William Keiller, "The Craze for Photography in Medical Illustration," *New York Medical Journal,* 59 (1894), ref. on p. 788):

> Henry Hering photographed patients in the Bethlem Hospital in the mid-1850s. In 1860, Charles Le Negre was ordered to compile a photographic report on the condition of inmates in the Imperial Asylum at Vincennes. Photographs of mentally retarded children were reproduced in *The Mind Unveiled* in 1858. B. A. Morel's *Traite des degenerescences physiques, intellectuelles et morales de l'espece humaine et des causes que produisent ses varietes maladises,* published in Paris in 1857, included illustrative photographs taken by Baillarger at the Salpêtrière where, in the 1880s Charcot and Richer opened a Photographic Department to aid their preparation of the *Nouvelle Iconographie de la Salpetriere.*

[18] *Ibid.*, pp. 81-83:

> In the 1860s, the Stockport Ragged and Industrial School commissioned a local photographer to assemble an album of pictures of the teachers and children at school. Similar records were kept in the Greenwich Hospital School. The next decade, the 1870s, saw a great expansion in the use of photographic documentation. The main prisons, such as Wandsworth and Millbank prisons and Pentonville Penitentiary, set up their own studios employing staff photographers. Local authorities commissioned photographic surveys of housing and living conditions in working-class areas and private societies, such as the Society for Photographing Relics of London, were founded. Children's Homes and Homes for 'Waifs and Strays', also followed the pattern of development, initially employing local portrait photographers,

then taking photographers on to their staff. In May 1874, Thomas John Barnardo opened his first Photographic Department in the 'Home for Destitute Lads' which he had founded at Stepney Causeway in 1871.

[19] André Rouillé, *Fotografia. Między dokumentem a sztuką współczesną*, (Polish edition of *La Photographie, entre document et art contemporain*), (Cracow: Universitas, 2007), p. 20.

[20] See: John Tagg (1988), p. 74.

[21] Althusser listed the following institutions as Ideological State Apparatuses (in an order with no particular significance):

> -"the religious ISA (the system of the different churches),
>
> -the educational ISA (the system of the different public and private 'schools'),
>
> -the family ISA,
>
> -the legal ISA,
>
> -the political ISA (the political system, including the different parties),
>
> -the trade-union ISA,
>
> -the communications ISA (press, radio and television, etc.),
>
> -the cultural ISA (literature, the arts, sports, etc.)"

Louis Althusser, "On the Reproduction of Capitalism. Ideology and Ideological State Apparatuses". Trans. G. M Goshgarian, (London-New York: Verso, 2014), p. 243.

[22] *Ibid.*, p. 259.

[23] Michel Foucault, *Discipline and Punish: The Birth of the Prison,* 1st American ed., (New York: Pantheon Books,1977).

[24] In 1888 George Eastman introduced the first Kodak camera with the catchy slogan: "You press the button we do the rest," which was put to use due to its previous programming.

[25] Gilles Deleuze, "Postscript on the Societies of Control," *October*, 59, Winter (1992), 3-7; ref. on p. 6:

> Types of machines are easily matched with each type of society – not that machines are determining, but because they express those social forms capable of generating them and using them. The old societies of sovereignty made use of simple machines – levers, pulleys, clocks; but the recent disciplinary societies equipped themselves with machines involving energy, with the passive danger of entropy and the active danger of sabotage; the societies of control operate with machines of a third type,

computers, whose passive danger is jamming and whose active one is piracy and the introduction of viruses.

(first published in: *L'autre journal,* 1990, nr 1). http://www.jstor.org/discover/10.2307/778828?uid=3738840&uid=2&uid=4&sid=21104221819637

[26] *Ibid.,* p. 98.

[27] The full title of Bentham's work is: *Panopticon; or The Inspection-House: containing The Idea of a New Principle of Construction applicable to any Sort of Establishment, in which Persons of any Description are to be kept under Inspection : (and in particular to Penitentiary-houses, Prisons, Houses of industry, Poor-houses, Manufactories, Mad-houses, Lazarettos, Hospitals and Schools: with a Plan of Management Adapted to the Principle: (In a Series of Letters, Written in the Year 1787, from Crecgeff, in White Ruffia, to a Friend in England)* – Jeremy Bentham, *The Panopticon Writings.* Edited by Božovič Miran, (London: Verso, 1995).

[28] Jean Baudrillard, *Wszyscy jesteśmy agnostykami*, in: *Pakt jasności. O inteligencji zła*. Translated into Polish by S. Królak, (Warszawa: Wyd. Sic!, 2005). Polish edition of: Jean Baudrillard, *Nous sommes tous des agnostiques,* in: *Le Pacte de lucidité ou l'intelligence du Mal*, (Paris: Editions Galilée, 2004).

[29] Edmund Husserl*, The Idea of Phenomenology,*trans. L. Hardy. (Dordrecht / Boston / London: Kluwer Academic Publishers, 1999), p. 28.

[30] Michael Foucault, *The Order of Things: An Archeology of the Human Sciences*, trans. Alan Sheridan (New York: Pantheon Press, 1970).

[31] Philip Goldstein, *Post-Marxist Theory. An Introduction,* ed. Joseph Natali (State University of New York Press, Albany, 2005), p. 114.

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