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Truth and Falsehood of the Mirror: Subjectivity – Reflection – Practice

Abstract

The author discusses different uses of the mirror metaphor in philosophy, literature and aesthetics. On one hand, a mirror serves to talk about human empowerment and inner life, while on the other becoming one of the most important metaphors of truth, of proper representation of reality. The final part of the paper considers the practical location of mirrors – and the practice of mirroring as the basis for other philosophical and existential metaphors. The author treats the mirror not only as a metaphor but also as an artefact with its own history: the history of an object but also social and economic history. By taking into account this physical history of mirrors, we can observe the changing foundation of epistemological and aesthetic metaphors.

Keywords: mirrors in culture, dialectics, metaphorology

Mirror, reflection, mirroring. Both the process of reflection and the artefact itself create an imaginational resource of countless philosophical models of truth and falsehood. A mirror-reflected image suggests it is possible to produce a faithful representation of reality, but also – almost at the same time – that this image can be inaccurate, distorted, blurred, too dark or too bright. Thus the mirror defines the purpose of cognition as well as simultaneously indicating the possibility of different obstacles to achieving that purpose.

Of course a mirror is not the only metaphor of truth and falsehood; another equally important example would be the image of light and darkness, organized around the metaphor of, for instance, a lamp, which is the mirror's great rival in both science and the arts (see Abrams, 2003). Quoting these two examples enables us to notice the real, physical basis of both metaphors,

which changed their meaning with the development of technology – with the improvement and popularization of artificial reflections as well as artificial light sources (Schivelbusch, 2004). If we also remember that both these technologies are often combined, for instance in mirror rooms where mirrors multiply the light by dispersing it, it will turn out that the two metaphors do not have to constitute alternatives and rivals at all, but are open to mutual translation. Indeed, light is a prerequisite for a mirror-reflected image, while mirrors themselves also contribute to brightening up various rooms by helping light disperse.

The present paper will discuss three fundamental meanings of the mirror in different discourses. The first two refer mainly to cognition and experience, to learning and aesthetics. A stable mirror standing in one place has become one of the main metaphors through which we speak of human subjectivity, and also of learning about the world. The experience of seeing our own mirror image is one of the pivotal moments in the development of human subjectivity – while the story of Narcissus gazing at his reflection has been an influence all the way to 20th-century theories of primary and secondary narcissism characterizing the constitution of individual consciousness, and in the theory of collective narcissism describing how a collective subject views itself in the mirror. Thus, the mirror is an artefact producing and disseminating different techniques of reflection – not only of the self but also social entities, networks, which reproduce themselves through a series of reflections. Therefore, the first part of the paper will discuss different subjective mirrors.

Part two will present different forms of mirroring – above all in art and philosophy. Mirroring is one of the most important aesthetic models: According to many theorists, art always reflects a reality, while others believe art should also mirror reality, because otherwise it does not fulfill its task. Thus, mirroring defines models of descriptive as well as normative aesthetics. A similar duality can be identified in metaphysical thinking about human cognition: Reflecting on the human mind leads fluidly to seeking adequate ways of mirroring the world. The mirror metaphor, therefore, stretches between the obvious situation of a direct reflection in a mirror and the realization that this reflection is not simple and obvious at all, as it encounters many possibilities of distortion, falsification, resulting in a reflection that is inaccurate, untrue, that has to be amended, corrected, changed.

The first two sections will focus on the subjective, theoretical and aesthetic meaning of the mirror. The model here will be mainly mirrors situated in one place, stable mirrors as well as small mirrors in which we see our own face – look at ourselves. In part three of the paper, I would like to analyze the less intuitive although also important and widespread meaning of the mirror, i.e. its practical application. Mirrors in everyday use are not only for looking at ourselves in detail; they also expand the human field of vision. They enable us to see what is behind us, to see things we cannot see when we are looking forward. Examples of such practical mirrors include car mirrors enabling drivers to see vehicles behind them. Thus, these are mirrors providing knowledge on changing reality, and at the same time causing the multiplication of different reflections in reality.

In all the sections of the present paper, the mirror and the reflection process are considered in a dual sense. At the forefront are metaphors – but we must not forget that those metaphors have a physical foundation that also underwent change. The metaphorological history of the mirror is the history of both the idea and the artefact. New possibilities of reflection, increasingly accurate and greater, move the process of mirroring away from its natural, fluid character toward fixing the image. This history of the technology of reflection is a social and economic history as well: It is also the history of the price of mirrors, monopolies tied to their manufacturing, the history of tradesmen who knew the secrets of making them, and, finally, the history of the democratization of mirrors, when everyone can view their own image at any time.

This complicated, network-like history of metaphors proceeds toward treating them much more broadly than in various linguistic and cognitive approaches. It is precisely examples like the mirror (and also light) that suggest we are dealing with more than metaphors, even than absolute metaphors to which Hans Blumenberg ascribed the special role of representing the entirety of philosophical ideas like the idea of the world or God, history, and humans in relation to them (Blumenberg, 2013, 2014). Those metaphors and artefacts serve as mediators taking part in negotiating different ways of understanding reality. Thus, these kinds of objects are not just metaphors serving to build utterances, but they also have the function of a technology for representing reality. They enable us to reduce complex reality by creating nodal points in the knowledge network.

1. The mirror: histories of subjectivity

In his *Dzieje zwierciadła* [*The History of the Mirror*] Mieczy-sław Wallis notes that "the invention of the mirror dates back to times immemorial, it preceded the invention of writing" (Wallis, 1974, p. 11). However, the mirror is an invention while also being something natural: Before the first polished metals and stones in which you could see your reflection appeared, people could see mirror images in water. The mirror as an artefact immediately puts humans in competition with nature, in a contest for creating a better, more accurate and more lasting mirroring of reality, particularly humans themselves. This suspension between nature on one hand and technology and artificiality on the other makes the mirror similar to another phenomenon that is both technical and natural, i.e. fire. Insofar as fire has the myth of its theft, a myth that became the foundation of many emancipative historiosophies, the mirror seems not to have played such a significant role. The Narcissus myth refers us more to what is private and intimate, while mirrors themselves – despite their important social role – have interfered more strongly with the individual sphere.

In the historiosophy of modernity as well, fire seems to play a more important role: It was a new way of controlling fire that launched the industrial revolution, while the burning of coal (among other things) enabled Europe to gain an advantage over the rest of the world in the 19th century and build a hegemony lasting many years. In this Promethean model, it is easy to forget the mirror. Nevertheless, starting from the 17th century we can find someone in practically every period who claimed it was the Baroque, the Enlightenment, or the 19th century that constituted the age of the mirror. This apparent discrepancy stems from the democratization of the mirror, which progressed with the process of modernity. Back in the 17th century, during the Venetian monopoly on mirror manufacturing, mirrors were extremely rare and precious goods, accessible mainly to the aristocracy (Melchior-Bonnet, 2007). It was not until new production technologies were developed that mirrors could be made in greater numbers, placed in large spaces, and their price could go down. Thanks to these complicated processes, mirrors passed from courtly society, where they had enabled people to train their person in proper presentation among high society,

to the world of burgher intimacy. Whereas the Promethean myth was responsible for a comprehensive story about the progress of civilization, the mirror became a medium for shaping modern subjectivity which, through different reflections, has had to undergo continuous self-observation to this very day.

Already the story of Narcissus found in *Metamorphoses* presents a situation of looking at the water reflection of one's own face – recognizing oneself, one's face, opens the way to thinking about identity, self-knowledge as well as different affects that a subject can direct toward himself or herself. Thus, a mirror also becomes the start of self-reflection – let us note, however, that the source of this self-reflection is not in the subject, in some supposed inner life, but in a complicated relationship with objects, with surfaces capable of producing reflections. The Narcissus myth involves a dual process: In the foreground we have the protagonist's mirror duplication. Therefore, the mirror creates a strange relationship: not with others – with oneself, but as a duplicated being, seen in reflection, and at the same time felt from the inside. It needs remembering, though, that to see himself, Narcissus had to isolate himself from the group. This entangles us in the complicated dialectic of individualization and duplication, a dialectic in which the subject abandons relationships with others in order to meet the Other as his or her own reflection.

The individual mirror mechanism has been processed in different ways in psychological concepts: in Sigmund Freud's notion of narcissism, Jacques Lacan's mirror stage, and in recent decades in the metaphor of mirror neurons (Keysers, 2017). All these theories assume we process our relationship with ourselves through external reflections; they make a shift in the strict separation between the individual and everything outside, especially other subjects, and also animals. Passing the mirror test was supposed to be one of the more important stages in becoming human. Similarly, the concept of mirror neurons locates the uniqueness of humans in their capacity for empathy and the development of special social competence enabling them to form numerous and complex groups capable of knowledge transfer and cooperation (Tomasello, 2017).

The theory of narcissism corresponded to different models of individualism and individuality. A broader version of this approach could be seen in the theory of collective narcissism outlined

by Erich Fromm in *The Anatomy of Human Destructiveness*. In group narcissism, the object of adoration is the community looking at itself in various symbolic images of itself; this collective fascination with one's group identity results in fanaticism, manifesting itself especially strongly in sensitivity to collective symbols. They are precisely the mirrors in which the community wants to see itself. Any violation or criticism of such symbols is perceived as an attack on the identity of the group constituted around those images.

The mirror image of the subject proceeded toward becoming more permanent. From a reflection in water, whose surface is the easiest to disturb, we moved on to artificial mirrors which, however, did not present an accurate image for quite a long time, so it was no wonder that the mirror became one of the most important symbols of inaccurate cognition, contrasted with directly looking at one another face to face. Photography seems to be the most important way of fixing a mirror image, and in its successive versions it enabled images to be captured more and more accurately and quickly. Obviously, digital forms of such stabilization of mirrored subjectivity include selfies, as images that you can see and capture in an instant and then disseminate effortlessly. In this case, we manage to eliminate the difference between a mirror reflection, always fleeting and transitory, and an image, which usually involves a temporal delay and other forms of indirectness. This model also defines new boundaries of mirror self-control accomplished thanks to the possibility of continually looking at oneself in captured images. An image of oneself, which is often modified and improved, becomes a template the subject tries to fit into.

Different meanings of the subjective mirror are analyzed by Heinrich Kleist in his essay *On the Marionette Theater*. This short text is based on the difference between a conscious being and a puppet or marionette, as it is structures of the human body deprived of consciousness that supposedly have the greatest charm. In the narrator's conversations with the mysterious Herr C., there appear three examples of confrontation between a conscious being and non-conscious bodies: the first one is the marionettes from the puppet theater, the second example is that of a statue that a graceful young man tries to imitate, while the third concerns an incredible swordfight with a master-swordsman bear. Example number two features a mirror, so let me quote it:

…we had just recently seen the statue in Paris of the youth removing a thorn from his foot; the statue is well-known and models of it can be found in most German collections. A look cast into a large mirror, at the moment when he was placing his foot on a stool to dry it, reminded him of the statue; he smiled and told me of the discovery he had made. In fact, I had, just at that very moment, made the same discovery; however, whether it were to test the sureness of the grace that possessed him, or whether it were to cure him a little of his vanity, I laughed and replied that he was probably seeing ghosts. He started to blush and raised his foot a second time to convince me; but the attempt, as could easily have been foreseen, was unsuccessful. He raised his foot in confusion a third and a fourth time, he raised it probably another ten times: all to no avail! He was incapable of repeating the same movement. What am I saying? The movements he made had such a comical element to them that I had difficulty keeping from bursting out laughing.

From that time, from that very moment on, an indescribable change came over the young man. He started to spend his days standing in front of the mirror; and as he did so one attractive feature after another deserted him. An invisible and unaccountable power seemed, like an iron net, to lay itself over his gestures and facial expressions, and after a year had passed, there was no trace left to find in him of the loveliness that the eyes of the people, who otherwise surrounded him, had delighted in[1] (Kleist, 2000).

The equal participants in this quite complex scene are two young men and two objects: an ancient statue and a mirror. Each of these actants influences the others. First of all there is the statue, treated not as a reflection of reality but rather as an ideal, a model that requires representation. One of the young men successfully imitates the ancient statue – in rather a complicated arrangement: He notices the correspondence in a mirror; also his friend does not see the reproduction of the statue's stance in reality but only as a reflection. But this fleeting mirroring is gone immediately; it is easy to question but impossible to repeat.

Attempting to repeat it results in the loss of gracefulness. Completely different notions appear in its place. The young man's body becomes imprisoned – although there is no question of any

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[1] English text from the translation by Kevin J M Keane, retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=7&ved=2ahUKEwi8jbqXoqrjAhVhl4sKHdX8AnkQFjAGegQIBxAC&url=http%3A%2F%2Fwww.kevinjmkeane.com%2Fwp-content%2Fuploads%2F2015%2F07%2FKleist-On-the-Marionette-Theatre.-July–2015.pdf&usg=AOvVaw26Ps8BWdl4oDxC7OuQrRHP

physical imprisonment, the metaphors used suggest something heavy and restrictive: An invisible, incomprehensible power appears as an iron net. This set of metaphors is difficult to keep separate from economics – an iron cage, a structure hard as steel, and the invisible hand of the market that determines people's economic actions. The young man in front of the mirror thus loses his charm and becomes entangled in the net of bourgeois life, a life without charm, a life tied to daily work and duties. In this case the easily accessible, private mirror turns out to be not so much a tool of the aesthetic narcissism of a romantic, beautiful soul as a mediator involving the individual in economic practice: The mirror, contrary to the ancient statue, is a commodity you have to pay for, and to pay for it you have to become implicated in a network of economic relations.

2. Mirror – mirroring of the world – art and science

The mirror model is one of the main tools of dialectic philosophy (Holz, 2005; Schickel, 2012). Leibniz's monadology treats an individual monad as a living reflection of the entirety of the world, and the relationship between what is mirrored and the mirroring itself opens up a whole complex of problems linked to the temporal and spatial aspect of representation. Contemporary philosophy in some of its realizations has moved from dialectic relationships to normative demands – then, mirroring stops being a dialectic relationship and becomes a cognitive and aesthetic norm. In such a case, science and art are given the task of correctly mirroring reality, for example anything in reality that is typical or progressive.

Note that in such a case, reification of the metaphor takes place – the reflection relationship is treated as virtually an automatic mechanism, to the exclusion of the mirror, or even that mirror moment, understood as the place of a separate artefact, the spectacle's mediator. In this theory, physical matter became primordial, while the social world was only supposed to be its reflection – this turned reflecting into a relationship of temporal succession and causality. Scientific learning about the social world and culture was meant to be limited to identifying relationships with physical entities. In aesthetics, too, the vision of the mirror

wandering across a courtyard to reflect all kinds of objects and phenomena can be reduced to the demand of simple realism, which is meant to be the criterion for evaluating individual works judged by their degree of progressiveness.

Where does this frequent reification of the metaphor come from? It occurs when the metaphor wears down, when you can no longer sense the moment of comparison, i.e. when the complicated play of different compared objects is replaced with the illusion of the directness of a relationship, e.g. between language and reality. Meanwhile, living philosophy makes bold use of different objects that continue to have the metaphorical power of opening up to things that are new and unexpected, thus often drawing upon various technical and media-related innovations. This is the case, for instance, in the well-known passage from *The German Ideology*:

> If in all ideology men and their circumstances appear upside-down as in a *camera obscura*, this phenomenon arises just as much from their historical life-process as the inversion of objects on the retina does from their physical life-process[2] (Marks, Engels 1961, p. 27).

The definition of ideology here has nothing to do with scientific exactitude, with serious defining of notions. Instead of logical operations, Marx builds a network of mediator objects: a *camera obscura*, which he must have known from experience but also from various diagrams explaining how it works, as well as the knowledge of optics and physiology of the time, also mediated through drawings of the eye. Therefore, this sentence is backed not only by a simple simile, but also by the institution of science from the first half of the 19th century, the latest media, and also the rules for copying the reality studied by science into textbooks and scientific works. It is something Bruno Latour

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[2] English text from Karl Marx & Frederick Engels, *The German Ideology: Part One with selections from Parts Two and Three, together with Marx's "Introduction to a Critique of Political Economy"*, edited and with introduction by C. J. Arthur, 2004, New York: International Publishers, retrieved from https://books.google.pl/books?id=DujYWG8TPMMC&pg=PA47&lpg=PA47&dq=%22if+in+all+ideology+men%22&source=bl&ots=j_VcXqrvUZ&sig=ACfU3U226-PEZWuEdCSVpzckxa_SuHkQFg&hl=en&sa=X&ved=2ahUKEwi22Prh4qrjAhVKtIsKHdI1CpIQ6AEwA3oECAgQAQ#v=onepage&q=%22if%20in%20all%20ideology%20men%22&f=false

called procedures of inscription – inscribing reality into new means of representation. Dialectic mirroring of reality, therefore, cannot be considered as an abstract process but has to take into account a network of different artefacts, mediators taking part in creating the representation.

The mirror also became the main metaphor in speculative philosophy, enabling us to speak of indirectness (Kuhn, 2014, p. 385). The structure of a mirror reflection involves a number of moments and differences that enable the content of speculative thinking to be expressed. This speculative status already belongs to the dual meaning of the mirror – on one hand being a physical object built from a specific material, while on the other being able to be a mirror only when it reflects something else – which makes it an object that actually cannot be seen, because other objects are always visible in it, reflected in the mirror surface. Being a mirror, therefore, is inseparably linked to the fact that we always see in it something other than the mirror itself. This structure has enormous speculative potential, because it enables us to think about objects that are visible things but at the same time are not so much the object that we are looking at, but rather they enable us to see something else, and, continuing – they make possible the existence of a reflection as well as enabling thinking about the difference between the thing reflected and the reflection. This means there is speculative potential in the duplication of objects itself, and in the problem of things that are visible and invisible at the same time, catching our eye in order to allow us to see something else.

3. Practical reflection

Both in the philosophy of the subject and in metaphysics and art, the mirror metaphor proceeded toward stability and immobilization. The mirror the subject faced, just like the reflection of the entirety of the world, was supposed to offer the possibility of aesthetic and theoretical cognition. The practical use of mirrors remained in the background. Meanwhile, mirrors do not so much serve the purpose of looking at ourselves or contemplating mirrored images as they expand our momentary perceptual capacity, enabling us to see what is "at the back of our head." In this context, Umberto Eco speaks of mirrors as being prosthetics, instruments expanding the scope of operation of a specific

organ, in this case the eyes (Eco, 2012, p. 18), allowing us to look behind us without turning our head.

Eco analyzes the example of an arrangement of mirrors thanks to which you can see what is going on behind you – there are movie examples of seeing someone entering a room and being noticed by another person. Probably the most interesting case, though, could be the use of mirrors in cars: Mirrors assist those traveling by car, where such travel in itself expands human capacity. Glancing in the mirrors is a routine action enabling the driver to gain information about other road users. Therefore, it is an important channel of communication with the surroundings. In this case the reflected image does not serve any aesthetic or theoretical contemplation, but is combined with the movement of body and vehicle. Mirroring serves to provide information important only at a given moment, connected with the current situation.

In theoretical deliberations on reflections, one crucial category was isomorphism as well as the structural correspondence between the thing represented and the representation. This shared form, however, assumed the hylomorphism of traditional metaphysics. But the mirror requires a different metaphysics – interesting inspiration in this respect is provided by Tim Ingold's project and his theory of medium, substances and surfaces. Above all, mirrors are special surfaces in which other surfaces are reflected – this applies to the water mirror as well as artefacts. It appears that mirrors create images without matter, but it may be more apt to state that these are images of surfaces without substance. It is hard to say that mirrors have the capacity to capture form and create some kind of isomorphism, especially in a metaphysical sense. It would be much more intuitive to speak of mirroring the surface of things. But what is this surface? In Ingold's concept (2018) the surface is the boundary between substance and medium – meaning that what is duplicated is a thing's surface boundary and not its internal structure. A relationship between different surfaces is formed – they are reflected in one another, creating a network of duplicates and appearances of spatial depth, flickering images multiplying the observed world.

Conclusion

Mirroring has functioned as the most important characterization of truth – both the truth of science and the truth of art.

The metaphor of mirroring, however, quickly got entangled in linguistic representation – it was words and sentences, notions and judgments that were meant to reflect reality. The dialectic of mirroring has gone in the same direction, treating the mirror as a principle of philosophical speculation. But the mirror can be treated completely differently – more physically and more network-based; then, it gains its own history – and it is precisely this history that always has to be somewhere in the background of the metaphor's interpretation. But the mirror, or actually the multiplicity of different mirrors and, more broadly, mechanisms by which reality is reflected in artefacts, is an important element of creating and representing reality. Mirrors become historical mediators that take part in a complicated network made up of people and things.

The dependence of theoretical thinking on metaphors, a popular notion in the second half of the 20th century, only partly fulfills the task of network-based thinking about mirroring. The proposals of Hans Blumenberg and Jacques Derrida (2002) emphasized the permanent presence of metaphors in philosophical texts, especially wherever the meaning of the most important categories needed to be explained. The concept of absolute metaphors assumed there is a limited set of images that mediate in understanding ideas such as the world, the soul, or history. I would not want to question the achievements of these philosophers, but it seems to me that their analyses stopped at too early a stage. Metaphors in the analyses of Blumenberg and Derrida are caged in the realm of text; they are words rather than things. Meanwhile, many of the absolute metaphors have very concrete equivalents in the world of life, and their meaning is not exhausted in schematic images. Most of these objects have their history, they undergo different changes – one such example being the mirror, changing its symbolic meaning but also its material structure.

Thus, the mirror sits at the intersection of different discourses. The mirror is a node in a complicated network – a node combining theory and practice, science and aesthetics, technology and speculation. Thanks to this capacity for uniting seemingly distant realms, an analysis of the mirror could be a paradigm for network and complex analysis in which the inhomogeneous components of the world find a voice.

This attempt at outlining different meanings of the mirror also shows how complicated the discussion must be about

abstract categories that we try to express with the help of the image of the mirror. The issue of truth and falsehood is one of those issues that can appear to be simple, clear and obvious, but in fact require the engagement of all kinds of actants: human and non-human, and also the presentation of the processes in which, thanks to the involvement of different phenomena and technologies, all that is human is shaped.

References

Abrams, M.H. (2003). *Zwierciadło i lampa. Romantyczna teoria poezji a tradycja krytycznoliteracka* (Polish edition of *The Mirror and the Lamp: Romantic Theory and the Critical Tradition*, transl. M.B. Fedewicz). Gdańsk: słowo/obraz terytoria.

Blumenberg, H. (2013). Światło jako metafora prawdy. Przedpole filozoficznego kształtowania pojęć (Polish edition of Licht als Metapher der Wahrheit. Im Vorfeld der philosophischen Begriffsbildung, transl. Z. Zwoliński). *Kronos*, No. 2, 32–59.

Blumenberg, H. (2017). *Paradygmaty dla metaforologii* (Polish edition of *Paradigmen zu einer Metaphorologie*, transl. B. Baran). Warszawa: Aletheia.

Derrida, J. (2002). *Biała mitologia. Metafora w tekście filozoficznym* (Polish edition of *La mythologie blanche: (la métaphore dans le texte philosophique)*). In: *Marginesy filozofii* (Polish edition of *Marges de la philosophie*, transl. A. Dziadek, J. Margański, P. Pieniążek) (pp. 261–336). Warszawa: KR.

Eco, U. (2012). *Po drugiej stronie lustra i inne eseje. Znak, reprezentacja, iluzja, obraz* (Polish edition of *Sugli specchi e altri saggi*, transl. J. Wajs). Warszawa: wab.

Fromm, E. (2014). *Anatomia ludzkiej destrukcyjności* (Polish edition of *The Anatomy of Human Destructiveness*, transl. J. Karłowski). Poznań: Rebis.

Holz, H.H. (2005). *Weltentwurf und Reflexion. Versuch einer Grundlegung der Dialektik*. Stuttgart-Weimar: J.M. Metzler.

Ingold, T. (2018). *Splatać otwarty świat* [Binding an Open World], selection by E. Klekot. Kraków: Instytut Architektury.

Keysers, Ch. (2017). *Empatia. Jak odkrycie neuronów lustrzanych zmienia nasze rozumienie ludzkiej natury* (Polish translation of *The Empathic Brain: How the Discovery of Mirror Neurons Changes Our Understanding of Human Nature*, transl. Ł. Kwiatek). Kraków: Copernicus Center Press.

Kleist, H. (2000). O teatrze marionetek (Polish edition of Über das Marionettentheater, transl. J. Ekier). In: T. Namowicz (Ed.), *Pisma teoretyczne niemieckich romantyków* [Theoretical Writings of German Romantics] (pp. 573–581). Wrocław: Ossolineum.

Kuhn, K. (2014). Spiegel. In: R. Konersmann (Ed.), *Wörterbuch der philosophischen Metaphern* (pp. 380–392). Darmstadt: WBG.

Latour, B. (2013). *Nadzieja Pandory. Eseje o rzeczywistości w studiach nad nauką* (Polish edition of *Pandora's Hope: Essays on the Reality of Science Studies*), K. Abriszewski (Ed.). Toruń: Wydawnictwo UMK.

Marks, K., Engels, F. (1961). *Ideologia niemiecka* (Polish edition of *Die deutsche Ideologie*). In: *Dzieła* [Works], vol. 3, I. Strumińska (Ed.). Warszawa: Książka i Wiedza.

Melchior-Bonnet, S. (2007). *Narzędzie magii. Historia luster i zwierciadeł* (Polish edition of *The Mirror: A History*, transl. B. Walicka). Warszawa: bellona.

Schickel, J. (2012). *Der Logos des Spiegels. Struktur und Sinn spekulativen Metapher.* Bielefeld: transcript.

Schivelbusch, W. (2004). *Lichtblicke. Zur Geschichte der künstlichen Helligkeit im 19. Jahrhundert.* München-Wien: Fischer.

Tomasello, M. (2019). *Becoming Human. A Theory of Ontogeny.* Cambridge, MA: The Belkamp Press of Harvard University.

Wallis, M. (1973). *Dzieje zwierciadła i jego rola w różnych dziedzinach kultury* [The History of the Mirror and Its Role in Different Areas of Culture]. Warszawa: Wydawnictwa Artystyczne i Filmowe.