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Can Ontology Be Related to Aesthetics? The Case of Leon Chwistek

Czy ontologię można powiązać z estetyką?
Przypadek Leona Chwistka

Summary

I explore Leon Chwistek's views on ontology and aesthetics through a philosophical analysis of his texts. I present and briefly discuss two main interpretations of Chwistek's ontology, i.e. logical and epistemological, before analyzing Chwistek's aesthetics to show how it may be based on his ontology. Furthermore, I link both interpretations to the problem of whether or not Chwistek's four realities share a common domain; a problem which is associated with his aesthetics. Finally, I make suggestions regarding further research on his notion of transitional types of art and the corresponding realities.

Keywords: Chwistek, reality, axiom, ontology, aesthetics

Streszczenie

Poprzez filozoficzną analizę tekstów Leona Chwistka badam jego poglądy na ontologię i estetykę. Przedstawiam i pokrótce dyskutuję dwie interpretacje, logiczną i epistemologiczną, ontologii Chwistka, a następnie analizuję estetykę Chwistka i pokazuję, jak może ona opierać się na jego ontologii. Ponadto łączę obie interpretacje z problemem istnienia części wspólnej czterech rzeczywistości Chwistka, który wiąże się z jego estetyką. Na koniec sygnalizuję możliwość dalszych badań nad przejściowymi typami w sztuce zaproponowanymi przez Chwistka oraz odpowiadającymi im rzeczywistościami.

Słowa kluczowe: Chwistek, rzeczywistość, aksjomat, ontologia, estetyka

0. Introduction

Leon Chwistek (1884–1944) was a philosopher, artist, aesthetician, and logician; he was also, along with Hugo Steinhaus, Stefan Banach, and Eustachy Żyliński, a representative of the Lviv School of Mathematics. Chwistek attempted to reconstruct the system of Whitehead and Russell from the nominalist point of view, abandoning the axiom of reducibility.¹ His work in this domain resulted in *The Principles of the Pure Type Theory*² and *The Theory of Constructive Types*³ (formulated in 1924–1925), to which Bertrand Russell refers in his introduction to the second edition of *Principia Mathematica*.⁴ (The theory of constructive types was subsequently formulated independently by Frank Ramsey, in 1925.⁵) However, Chwistek’s philosophical thought is not discussed very much in Western philosophy. He is known chiefly for his theory of constructive types,⁶ his introduction of the “simple theory of types”, and for his intellectual relationship with Bertrand

¹ R. Eberle, *Nominalistic Systems*, Reidel, Dordrecht 1970. Cf. J. J. Jadacki, *Polish Analytical Philosophy*, Semper, Warsaw 2009; J. J. Jadacki, “Leon Chwistek’s View on Language”, *Studia Semiotyczne – English Supplement* 13 (2015), p. 21–32.

² L. Chwistek, “The Principles of the Pure Type Theory”, transl. A. Trybus, *History and Philosophy of Logic* 33/4 (2012), p. 329–352.

³ L. Chwistek, *The Theory of Constructive Types (Principles of Logic and Mathematics)*, University of Michigan, University Library, Ann Arbor 1988.

⁴ A. N. Whitehead, B. Russell, *Principia Mathematica*, 2nd ed., vol. 1–3, Cambridge University Press, Cambridge 1925–1927, p. XIV. See B. Russell, *My Philosophical Development*, Simon and Schuster, New York 1959, p. 122.

⁵ F. Ramsey, “The Foundations of Mathematics”, *Proceedings of the London Mathematical Society* (Series 2), 25 (1925), p. 338–384.

⁶ B. Linsky, “Leon Chwistek on the No-classes Theory in *Principia Mathematica*”, *History and Philosophy of Logic* 25/1 (2004), p. 53–71; B. Linsky, “Leon Chwistek’s Theory of Constructive Types”, in: *The Golden Age of Polish Philosophy*, eds. S. Lapointe, J. Woleński, M. Marion, W. Miskiewicz, Springer, Dordrecht / Heidelberg / London / New York 2009, p. 203–219.

Russell,⁷ which involved Russell recommending him for the chair of mathematical logic at the University of Lviv in 1928, the other candidate being Alfred Tarski; Chwistek was given the position.⁸ Chwistek achieved recognition as the author of *The Limits of Science*⁹ and of the theory of the plurality of realities¹⁰ – in the case of the latter, particularly thanks to recently published translations of his ontological works.¹¹ His theory of the plurality of realities (developed in 1917 and 1921) has been compared with the later pluralistic ontology of Nelson Goodman.¹² To the best of my knowledge, research on the relationship between Chwistek's ontology and his aesthetics is lacking. In this paper, I present and discuss his main ontological and aesthetic ideas, outline two interpretations of his notion of 'reality,' and explain how his aesthetics is grounded in his ontology. In terms of this grounding relation, his aesthetics shares the logical character of his ontology. At the very least, the example of Chwistek's philosophy shows that it is

⁷ J. J. Jadacki, "Leon Chwistek – Bertrand Russell's Scientific Correspondence", *Dialectics and Humanism* 13 (1986), p. 239–263. Cf. B. Linsky, *The Evolution of Principia Mathematica: Bertrand Russell's Manuscripts and Notes for the Second Edition*, Cambridge University Press, Cambridge 2011.

⁸ J. Woleński, "Logic and the Foundations of Mathematics in Lvov (1900–1939)", in: *Lvov Mathematical School in the Period 1915–1945 as Seen Today*, eds. B. Bojarski, J. Ławrynowicz, Y. Prytula; Banach Center Publications, Instytut Matematyki, Polska Akademia Nauk, Warszawa 2009, p. 38–39.

⁹ L. Chwistek, *The Limits of Science. Outline of Logic and of the Methodology of the Exact Sciences*, transl. H. Brodie, A. Coleman; Kegan Paul, Trench Trubner, New York 1948.

¹⁰ L. Chwistek, "Wielość rzeczywistości", in: L. Chwistek, *Pisma filozoficzne i logiczne*, vol. 1, Państwowe Wydawnictwo Naukowe, Warszawa 1961, p. 30–105.

¹¹ L. Chwistek, *The Plurality of Realities. Collected Essays*, transl. K. Chrobak, Jagiellonian University Press, Kraków 2017.

¹² J. Tarnowski, "Wprowadzenie do filozofii kultury Nelsona Goodmana", *Sztuka i Filozofia* 8 (1994), p. 41–58.

possible to think of both aesthetics and artistic practice as being based on a logically described ontology.

1. Ontology: Chwistek's theory of the plurality of realities

According to Chwistek, a philosophical system should satisfy two main conditions: consistency and completeness.¹³ Consistency means that the system should not contain any internal contradictions. A complete system is one based on all possible life experiences. The second condition is not absolute, but should rather be understood as a relative requirement: a valuable system is based on as many experiences and as many types of experiences as possible.

Chwistek's requirements share some similarities with the thought of logical positivism.¹⁴ It may also be desirable to justify these two requirements with reference to the system's ability to predict future events, and thus to the system's usefulness. Let us consider the requirement of consistency. From a system containing at least one contradiction, that is, statements of p and non- p , any statement may be inferred. This implies the system's lack of predictive value; it will not provide us with limited predictions, since we can deduce any statement therefrom. Thus a contradictory system, which generates an infinite number of consequences, is likely to be considered useless. We can defend the requirement of completeness in a similar vein. According to Chwistek, the system's form should depend on empirical or life experiences. The fewer empirical experiments upon which a system is based, the more likely it is that it will

¹³ K. Chrobak, "Leon Chwistek's Pluralistic Vision of Reality", in: L. Chwistek, *The Plurality of Realities. Collected Essays*, transl. K. Chrobak, Jagiellonian University Press, Kraków 2017, p. 72.

¹⁴ A. Ayer, *Logical Positivism*, The Free Press, New York 1959; F. Stadler, *The Vienna Circle Studies in the Origins, Development, and Influence of Logical Empiricism*, Springer, Cham/Heidelberg/New York/Dordrecht/London 2015. See K. Chrobak, "Leon Chwistek's...", p. 75.

be of little predictive value; consequently, the system will be less useful.

But Chwistek's ontology also transcends logical positivism, because his conception of the plurality of realities encompasses worldviews that differ from scientific ones. Before I introduce this theory, let me offer a few remarks. First, Chwistek tentatively considers it to be preliminary. Secondly, in his book *The Limits of Science*, he renounces his formal explanation of the theory. Thus, the conception may be considered an unfinished project, but one worthy of critical analysis. Lastly, this theory of the plurality of realities has two aspects, i.e. the plurality of ontological worldviews and the plurality of realities validating these worldviews. Hence, some ambiguity may arise in the presentation of the plurality of realities, but this should disappear following my presentation and critical discussion of the two main interpretations of the theory—logical and epistemological.

Let us begin by highlighting that Chwistek makes a distinction between phenomenalism and realism. For him, these are equally probable hypotheses, because no conclusive argument can be formulated against either. Neither can be excluded, yet accepting both of them results in a contradiction.

Phenomenalism consists of at least three axioms, the third of which, (3a), is peculiar to this worldview:

- (1) for every x , “if x is immediately given, x is real”;
- (2) for every x , “if x is visible, x is real”;
- (3a) for every x , “if x is real, then x is visible or immediately given”.¹⁵

¹⁵ L. Chwistek, “The Plurality of Realities”, in: L. Chwistek, *The Plurality...*, p. 188–190. Here, I assume that the predicates: “is visible” and “is immediately given” are complementary: “Let us note that surrounding objects (the Eiffel Tower, the Moon) are visible, but they are not immediately given in their entirety. Phenomenalists claim that what is immediately given to us is parts of these objects, but they have to admit

Realism replaces (3a) with its negation:

- (3b) there is an x , such that x is real and x is not visible,
and x is not immediately given.

Since (1) and (2) are true in Chwistek's realism, this realism is not Platonic. It is rather one that is opposed to the phenomenalism described as *esse est percipi*.

Neither phenomenalism nor realism can be decisively rejected. Since Chwistek does not accept inconsistent worldviews or realities, phenomenalism and realism are not both true in one reality. Thus, they are true, separately, in two different realities.

Chwistek divides each worldview, phenomenalism and realism, into two types. The result is four types of worldviews: two types of phenomenalism and two of realism. The former include the phenomenalism (α) of impressions and (β) of imag-

that there are always some parts of them which, despite being visible, are not immediately given; we therefore cannot literally say that the objects in our surroundings are given to us immediately. Such a statement is even less acceptable from the point of view of the realists, who reject the idea that even parts of the objects in our surroundings might be given immediately. On the other hand, however, not everything that is given immediately is visible, like, for example, tunes, pain, etc. So we see that the first and the second function are substantially different" (L. Chwistek, "Three Lectures Relating to the Concept of Existence", in: L. Chwistek, *The Plurality...*, p. 137). The other interpretation, which I find less interesting, originates from "The Plurality of Realities": "The ambiguity of the concept of what is immediately given and what is visible is obvious. Undoubtedly, immediately given are my impressions, imaginations, emotions etc. But is, for example, the tree that I see outside the window immediately given? No, because I see only part of it. Yes, because even though I do not see all parts of it, I see them as a whole. A similar ambiguity lies in the concept of visibility. It is sure that an ink stain on paper is visible, that atoms are invisible, but is for example Lomnica mountain visible? No, because I cannot designate a point from which it would be visible »better« than from another one. Yes, because I can designate such points from where I see it as »to some extent« good" (L. Chwistek, "The Plurality of Realities", in: L. Chwistek, *The Plurality...*, p. 188).

inations; the latter the realism (γ) of things and (δ) of physics. Chwistek provides the next six axioms:

- (4a) for every x , x is visible iff x is visible in a “waking state”;
- (4b) it is not true that for every x , x is visible iff x is visible in a “waking state”;
- (4c) for every x , x is visible iff x is visible under “normal conditions”;
- (4d) it is not true that for every x , x is visible iff x is visible under “normal conditions”;
- (5a) “a part of a real object is real”;
- (5b) “an object whose part is real is real”.¹⁶

The set of axioms {(1), (2), (3a), (4a), (4d)} partially describes worldview (α);
 the set {(1), (2), (3a), (4b), (4d)} partially describes (β);
 the set {(1), (2), (3b), (4a), (4c), (5a), (5b)} partially describes (γ);
 the set {(1), (2), (3b), (4a), (4d), (5a), (5b)} partially describes (δ).¹⁷

The reason a particular set of beliefs only “partially” describes a particular worldview is that Chwistek never considered his formal theory to be complete.

¹⁶ L. Chwistek, “The Plurality of Realities”, in: L. Chwistek, *The Plurality...*, p. 190–192.

¹⁷ The distinction between (α) and (β) is quite clear, since in (β) dreams can be considered as real. The distinction between (γ) and (δ) seems to be vague. The difference lies in the notion of being visible in normal conditions. It suffices to say that abnormal conditions are exemplified in (δ) as these that are an effect of using some scientific devices like a microscope. So seeing through these devices is seeing in abnormal conditions. In the realism of things, as opposed to the realism of physics, we restrict ourselves to the visibility in normal conditions. See also the footnote 37.

At this point, the presentation of Chwistek's theory seems to offer nothing philosophically significant apart from the plurality of worldviews.¹⁸ However, the theory actually transcends this by answering the question of what, in ontological terms, makes worldviews true. It states that there cannot be only one reality, because such a reality would have to satisfy a contradiction, for example, the conjunction of axioms (3a) and (3b), whereas we know that (3a) iff (\sim 3b). But it is also true that (4a) iff (\sim 4b) and (4c) iff (\sim 4d). This is because (4b) is a negation of (4a), and (4d) is a negation of (4c). Additionally, we affirm that Chwistek's theory of the plurality of realities respects the principle (P1): for every worldview W and for at least one axiom a of W , there is an axiom $\sim a$ of a worldview different from W . If we consider a randomly chosen worldview W , i.e. a set of axioms or ontological beliefs, then, in W , there is an axiom which creates a contradiction with one of the axioms from other worldviews; e.g. assuming $W = (\alpha)$, (α) contradicts (β) at point (4a), because (β) contains (4b); (α) also contradicts (γ) and (δ) at point (3a), because (γ) and (δ) contain (3b). Hence, to avoid a contradiction, we have to assume that, for worldviews (α), (β), (γ), and (δ), there are four separate realities, **R1**, **R2**, **R3**, and **R4**, in which these worldviews are, respectively, true. The first two realities are phenomenalistic and the last two realistic, i.e. they validate the two kinds of realism proposed by Chwistek. Thus, to make this clear and to provide names for the realities:

- R1**, the reality of impressions, satisfies (α);
- R2**, the reality of imaginations, satisfies (β);
- R3**, the reality of things,¹⁹ satisfies (γ);
- R4**, the reality of physics, satisfies (δ).

¹⁸ Cf. W. James, *A Pluralistic Universe*, University of Nebraska Press, Lincoln 1996.

¹⁹ Also known as *the practical, everyday reality*; see L. Chwistek, "Three Lectures Relating...", p. 140.

We formulate principle (P2) similarly to principle (P1): for every reality **R** and for at least one axiom *a* satisfied by **R**, there is an axiom $\sim a$ satisfied by a reality different from **R**.

In the secondary literature concerning the plurality of realities, there are two main interpretations of the notion of ‘reality.’ The first, proposed by Teresa Kostyrko,²⁰ can be called logical, the second, proposed by Karol Chrobak,²¹ epistemological. While in the literature it is suggested that these two interpretations are opposed,²² I will argue that they may, in fact, be complementary.

2. Two interpretations of Chwistek’s ontology

According to Kostyrko, who bases her logical interpretation on model theory, Chwistek made the truth of a statement depend on the corresponding reality. His works, in particular *Trzy odczyty odnoszące się do pojęcia istnienia* from 1917²³ (*Three Lectures Relating to the Concept of Existence*) and *Wielość rzeczywistości* from 1921 (*The Plurality of Realities*), were ahead of their time; although Chwistek did not contribute significantly to model theory, his thinking was similar to that established within the framework of this theory in the mid-twentieth century. Thus, his works may be considered philosophically revolutionary. In this regard as well, some of the literature com-

²⁰ T. Kostyrko, *Leona Chwistka filozofia sztuki*, Instytut Kultury, Warszawa 1995.

²¹ K. Chrobak, L. Chwistek, *Niejedna rzeczywistość: racjonalizm krytyczny Leona Chwistka. Sens i rzeczywistość*, Inter Esse, Kraków 2004.

²² H. Bożek, “Teoria wielości rzeczywistości Leona Chwistka. Rys krytyczny”, *Argument* 4/2 (2014), p. 405–424; K. Chrobak, “Leon Chwistek’s...”.

²³ L. Chwistek, “Trzy odczyty odnoszące się do pojęcia istnienia”, in: L. Chwistek, *Pisma filozoficzne i logiczne*, vol. 1, Państwowe Wydawnictwo Naukowe, Warszawa 1961, p. 3–29.

pares the plurality of realities with David Lewis's conception of possible worlds.²⁴

Kostyrko interprets Chwistek's realities as models. Here it suffices to say that, in Kostyrko's interpretation, a model belongs to a different sphere than a theory. If Chwistek's realities are models, the four worldviews (α , β , γ , δ) are theories satisfied by the realities. Also, beliefs or axioms within these worldviews can be called criteria which qualify an object to belong to a specific reality.²⁵

This interpretation reflects the formal aspect of Chwistek's theory, presented in the aforementioned works (1917, 1921). However, several objections can be made to Kostyrko's interpretation. As stated previously, the problem is that, in *The Limits of Science*, Chwistek renounced all attempts to axiomatize his theory; in *Zagadnienia kultury duchowej w Polsce (On Spiritual Culture in Poland)* he designated it an "individual system" with no pretensions to objectivity and thus to semantics.²⁶ Other objections to Kostyrko's interpretation, which I will not discuss here, can be found in Chrobak's work, *Leon Chwistek's Pluralistic Vision of Reality*. The literature also includes conclusions which lend support to Kostyrko's interpretation – for example, that Chwistek's theory concerns realities, not concepts of realities, and that his theory is an ontological postulate, not an epistemological statement.²⁷ Kostyrko's in-

²⁴ K. Chrobak, "Rzeczywistości Leona Chwistka a światy możliwe Davida Lewisa", in: *Kosmologie światów możliwych*, eds. J. Jaskóła, A. Olejarczyk, Wydawnictwo Uniwersytetu Wrocławskiego, Wrocław 2002, p. 217–225.

²⁵ J. Woleński, "Leon Chwistek: Philosophy, Logic and Art", in: *Leon Chwistek. Nowe kierunki w sztuce. New Trends in Art*, ed. K. Chrobak, Muzeum Sztuki Współczesnej w Krakowie MOCAR, Kraków 2018, p. 107.

²⁶ See L. Chwistek, "Zagadnienia kultury duchowej w Polsce", in: L. Chwistek, *Pisma filozoficzne i logiczne*, vol. 1, Państwowe Wydawnictwo Naukowe, Warszawa 1961, p. 198.

²⁷ K. Pasenkiewicz, "Leon Chwistek's Theory of Manifold Reality", *Studia Filozoficzne* 37/2 (1964), p. 180–181. See also L. Chwistek, *The Plurality...*, p. 193–194.

interpretation enables us to analyze Chwistek's theory on the basis of logical tools, the use of which yields clear, unambiguous results.

Mainly on the basis of Chwistek's early work, *Sens i rzeczywistość*²⁸ (*Meaning and Reality*) completed in 1916, Chrobak proposed a second, epistemological interpretation, which states that Chwistek's realities (**R1**, **R2**, **R3**, **R4**) are types of human experiences.²⁹ In *Meaning and Reality* as well as in *The Plurality of Realities*, Chwistek stresses the importance of human life experiences and psychological dispositions, both of which contribute to the existence of realities. Since in the epistemological interpretation realities are not models, I propose that we can substitute the word *contains* in the above statements for the word *satisfies*. This gives us:

- R1** (the reality of impressions) contains (α);
- R2** (the reality of imaginations) contains (β);
- R3** (the reality of things) contains (γ);
- R4** (the reality of physics) contains (δ).

This means that a concrete worldview is a part of a particular reality which, here, is equal to a type of human experience. More importantly, it means that axioms in these worldviews should be understood intuitively and taken syntactically³⁰ – as

²⁸ L. Chwistek, *Sens i rzeczywistość*, in: K. Chrobak, L. Chwistek, *Niejedna rzeczywistość...*, p. 321–476; L. Chwistek, “Meaning and Reality” (Excerpts), in: L. Chwistek, *The Plurality...*, p. 81–112.

²⁹ K. Chrobak, L. Chwistek, *Niejedna rzeczywistość...*; see also K. Chrobak, “Plurality of Ontologies. How to Understand the Diversity of Reality?”, in: *Ontologien der Moderne*, eds. R. John, J. Rückert-John, E. Esposito, Springer VS, Wiesbaden 2013, p. 85–106.

³⁰ Here, I do not negate the relationship between syntax and semantics. I believe that we can abstract one from the other. Sometimes we are influenced by words while we are not aware of their denotation. I think that Chrobak's interpretation stresses the importance of that situation because he claims Chwistek's realities are just types of human experiences.

opposed to Kostyrko's approach, which concerns denotations of the axioms and stresses the importance of semantics.

In the epistemological interpretation, Chwistek's realities are types of human experiences. The beliefs (i.e. axioms) comprising a worldview (α , β , γ or δ) are contained in a type of human experience, and thus, in this interpretation, in a reality. We do not know whether the reality (here, a type of human experience) is equivalent to the worldview. It is more plausible to believe that it is not, because the statement that the reality is not equivalent to the worldview is more compatible with the preliminary character of Chwistek's theory. For, if the reality were equivalent to the worldview, there would be no space to extend a set of beliefs within the latter, which is possible only because of its preliminary character.

One objection to the epistemological interpretation can be made here: when it is applied to Chwistek's theory, the latter loses its ontological character (because it is a theory of *reality*). According to Chrobak's interpretation, Chwistek's theory is merely a theory of the plurality of human experiences, but these need not be grounded in something which is purely ontological and independent of a subject. Moreover, these experiences are grounded in human psychological dispositions to perceive the world, thus making Chwistek's conception *only* a psychological theory, which it is not because Chwistek's considerations on what is real are philosophical in essence.

It seems, however, that the epistemological interpretation can be confined to the role of describing a certain property of the theory of the plurality of realities: namely, the foundation of these realities on various human dispositions. On the other hand, the logical interpretation seems to be more suitable for commenting on and developing the formal aspect of this theory. Furthermore, we can render the two interpretations complementary. Each interpretation may be considered as a different developmental stage of the concept of reality. It is plausible to say that people begin to perceive the world in ac-

cordance with their psychological dispositions. Subsequently, they gather experiences and develop concepts of reality. But these concepts can be specified and expressed in many ways, one of which is expression in formal language. Kostyrko's logical interpretation can be conceived as a further development of the concept of reality, described in model theory language. In other words, Chwistek's sets (worldviews) of axioms and models (realities) may constitute an explication of the types of human experiences (i.e. the realities of Chrobak's interpretation). To sum up, the two interpretations are not necessarily mutually exclusive.

3. How do Chwistek's aesthetics relate to his ontology?

Chwistek makes a general claim that there is a correspondence between realities and types of art, but he does not explain this relationship by referring to the axioms. Hence, my aim in this chapter is to show that these axioms, understood as ontological beliefs, may plausibly be considered as the necessary conditions for creating a particular type of art.

Chwistek's aesthetics, known as the theory of the plurality of realities in art, differentiates four types of art: primitivism, realism (and, within this type, naturalism), impressionism, and new art (beginning with the avant-garde art of the early twentieth century). His aesthetics, presented mainly in two works, *Wielość rzeczywistości w sztuce*, from 1918 (*The Plurality of Realities in Art*)³¹ and *Wielość rzeczywistości* (1921), was formulated to justify trends other than naturalism in art. We may be inclined to think that one evaluates a work of modern art and a work of Renaissance art on the basis of different criteria. I will not go into details here, e.g. the criteria which

³¹ L. Chwistek, "Wielość rzeczywistości w sztuce", in: L. Chwistek, *Wybór pism estetycznych*, Universitas, Kraków 2004, p. 3–20. L. Chwistek, "The Plurality of Realities in Art", in: L. Chwistek, *The Plurality...*, p. 143–162.

Chwistek conceives as applying to all types of art.³² In this section, I present four types of art and connect them to the four realities and worldviews Chwistek proposes.

The four types of art are grounded in the four realities:

primitivism is based on **R3**;
 realism is based on **R4**;
 impressionism is based on **R1**;
 new art is based on **R2**.

This means that these types of art reflect realities. It may be suggested that Chwistek, in speaking about a “strict correspondence”³³ between types of art and realities, refers in a broad sense to mimesis, which means that, for example, even new art mimics a reality. Some authors³⁴ have proposed that ‘reality’ can be understood here as the socio-cultural conditions of the epoch; this justifies Kalinowski’s comparison of Chwistek with Arnold Hauser. For my purpose it is sufficient to assume that types of art reflect realities and, in particular, the sets of ontological beliefs (α , β , γ , δ) partially describing realities.

I will approach the problem of the foundation of Chwistek’s aesthetics from the artist’s perspective. I assume that every artistic practice resulting in one of the four types of art may respect the beliefs of the worldview which partially describes the reality to which the practice corresponds.³⁵ On this assumption, an artistic practice may simply be directed by at least some of the relevant beliefs. It is irrelevant here whether the artist holds the beliefs consciously or not. Judging from the

³² L. Chwistek, “The Plurality of Realities in Art”, p. 161–162.

³³ L. Chwistek, “The Plurality of Realities in Art”, p. 145.

³⁴ W. Kalinowski, *Wątki socjologiczne w polskiej estetyce międzywojennej*, Wydawnictwo Polskiej Akademii Nauk, Wrocław/Warszawa/Kraków/Gdańsk 1973.

³⁵ Cf. T. Kostyrko, *Leona Chwistka...*, p. 65.

type of work of art, we may ascribe certain beliefs to the artist who created it. The most important reason for this is that worldviews constrain artistic practice. (Similarly, artistic practice is constrained by the reality it reflects.) In particular, as worldviews include ontological beliefs, they determine the set of means (in a broad sense) that the artist may use if his/her artistic practice is to respect a certain type of art. The determination of a set of means can be accomplished if one focuses on the semantics of the axioms.

The first type of art Chwistek mentions is primitivism, examples of which may be taken from prehistoric, Archaic Greek, and Romanesque art. The main problem of primitivism is to answer the question “what are things?”³⁶ However, primitivism, in contrast to realism or naturalism, does not pursue this goal by mirroring what can be seen, because it reflects **R3**, which is also called practical reality. Thus, the artist creating primitivist art needs to know the practical purpose that the work of art will serve. For example, if the artist creates a portrait for a person in love with the portrait’s subject, the primitivist approach would require some idealization to emphasize the attractiveness of that subject. Generally, a work of primitivist art should serve some life-related or practical functions.

It is unlikely for a primitivist artist to use devices like *camera obscura* or *camera lucida*³⁷ because he/she is not concerned with mirroring reality. Similarly, he/she may not even use knowledge of perspective or human anatomy. The artist is obliged to conform his/her artistic practice to certain patterns of visual representations such as established poses and attributes of figures. These patterns represent the predominant beliefs in practical reality.

³⁶ L. Chwistek, “The Plurality of Realities in Art”, p. 152.

³⁷ A *camera lucida* is an optical device invented in 1806 by William Hyde Wollaston. Through the prism of the device an observer can see a reflected image of what is in front of the prism. The image can be easily traced with a pen or a pencil.

Primitivism should respect axiom (3b) because the aforementioned patterns (e.g. a saint with an attribute) may not pertain to something which is visible or immediately given. The primitivist artist in his/her means of artistic practice can therefore transcend the realm of impressions. Two other axioms, (4a) and (4c), are applicable here. (4a) requires that the art should not pertain to, for example, hallucinations or dreams. (4c) requires that the art should pertain to “normal conditions” of seeing;³⁸ this is connected to not using *camera lucida* or other devices.

The second type of art is realism, as exemplified by the naturalist Gustave Courbet, but also by prominent Renaissance artists (Michelangelo, Leonardo da Vinci, Raphael). The main problem of realism is to answer the question “what are the relationships between things, sources of light, and the perceiver”.³⁹ The ideal of realism is to copy what can be seen and to mold it in a such manner that it resembles a mirror reflection. This ideal may be unachievable, but this does not mean that attempts to approximate it should be abandoned. The realist artist may also use some visual patterns; however, these are unlike the ones primitivist artists use, as they derive from the means of realism and science.

Realist art is based on **R4**, the reality of physics. The realist artist uses scientific achievements. He/she eschews the *alla prima*⁴⁰ or *croquis*⁴¹ techniques, preferring to paint realistically for long hours. Since light conditions change, there is a need

³⁸ “... beside the normal seeing that instructs us of the features of things we accept the existence of the abnormal seeing that may be caused by distance, lighting, or by some peculiar relation to a phenomenon, which means that instead of things we see more or less faithful images of them” – L. Chwistek, “The Plurality of Realities”, in: L. Chwistek, *The Plurality...*, p. 204.

³⁹ L. Chwistek, “The Plurality of Realities in Art”, p. 154.

⁴⁰ It means to paint quickly and with only one layer of paint (without, for example, a pencil sketch).

⁴¹ *Croquis* are quick, usually monochromatic, sketches of a model.

to make the picture consistent in this respect. Thus, the artist uses visual patterns connected to such sciences as anatomy and optics. This is because, in realism, axiom (3b) applies, allowing the artist to use visual patterns which are not (currently) visible or immediately given. What makes realism different from primitivism is axiom (4d). This means that the artist may choose not to adhere to normal visual conditions; thus it is not particularly important to present things in a picture so that they can be easily recognized. It is important that the picture may resemble a mirror reflection of certain phenomena; this is different from a picture where everything can be easily named or recognized, as is true in primitivism.

Primitivism and realism must also conform to axioms (5a) and (5b). This is because both (γ) and (δ) contain (5a) and (5b). Thus, every part of a primitivist or realistic representation of what is conceived as real should be likewise conceived as real. This means, therefore, that primitivist or realistic pictures should be aesthetically consistent. Conversely, if we are given a part of this representation which is 'real' (or allowed in this type of art), then the whole of which it is a part should be real as well.

The third type of art which reflects reality **R1** and worldview (α) is impressionism. Notable impressionist figures include Claude Monet, Camille Pissarro, and Edgar Degas. The main problem of impressionism is "how do I record what I see at a particular moment?".⁴² The 'moment' here means not an instant but a period of time. It is plausible to assume that this period is much shorter than that within which a realist creates a work of art. Moreover, a realist need not worry about the continuity of the time period in which he/she creates. For an impressionist this would seem to be crucial, because stopping work for a certain time may mean a change in the reality of his/her impressions.

⁴² L. Chwistek, "The Plurality of Realities in Art", p. 156.

The impressionist's means are limited to life observations which need not conform to any theory or *a priori* visual patterns deriving from either science or popular beliefs. *Croquis* are important exercises for an impressionist painter, and the preferred method is *alla prima*. This is because *croquis* sketches and *alla prima* paintings are useful means for capturing a moment. Being able to capture a moment makes an impressionist different from other artists.

Impressionism reflects the phenomenalist nature of impressions; thus impressionist practice should be directed by axiom (3a). Generally, everything which is an impression is real, and the set of real objects includes those which may be used as artistic means. This is because if we want to use something, we should assume that it exists. The pure type of impressionist can use only impressions, refraining from using the scientific achievements of anatomy or optics. Here, axiom (4a) applies as well; this axiom is common to the three types of art presented so far. This means that these artists cannot use dreams or visions. But abnormal conditions (4d) are allowed, since an impressionist work of art does not require easy recognition of the objects depicted therein (i.e. the work of art can depict an object behind the mist).⁴³

The last, fourth, type of art is new art. Here, we may mention some examples of avant-garde artists, such as Salvador Dalí or Marcel Duchamp; however, this type of art is open, which means that we may also include contemporary artists. The main problem of new art is to answer the question "how can we select from all reproduced and sense impressions only those that constitute the fundamental elements of reality?"⁴⁴

The means that can be used by an artist representing new art consist of imaginations: sense impressions (independent

⁴³ The meaning of "abnormal" *versus* "normal" conditions/seeing is explained in the footnote 37.

⁴⁴ L. Chwistek, "The Plurality of Realities in Art", p. 158.

of the will), reproduced impressions (retained/remembered impressions), combinations of the above, and fantasies which scarcely resemble anything real. To “constitute the fundamental elements of reality” should be also taken in a broad sense: what is ‘fundamental’ is a matter of the artist’s own beliefs. New art is also free from dependence on impressions which can be recorded within a relatively short period of time (when compared to an impressionist’s artistic practice). In new art, the artist can combine reproduced impressions and fantasies (e.g. visions or dreams) from different periods of time; the duration of these periods is not constrained.

Reproduced impressions and fantasies, as used by the new-art artist, are impressions, which is consistent with the fact that the reality from which new art derives is subject to axiom (3a). Furthermore, a new-art artist has no reason to limit visibility to normal conditions (4d). New art is the only type of art that reflects axiom (4b), which negates the idea of identifying visibility with visibility in the waking state. A reproduced impression, which constitutes the material peculiar to new art, can come from a dream.

A particular interpretation of Chwistek’s ontology may have influenced his conception of art. It is also important to know whether all four types of art should respect axioms (1) and (2). If we assume Chrobak’s epistemological interpretation and his statement that the four realities share a common domain,⁴⁵ namely axioms (1) and (2), then these axioms contain universal meaning for artists, at least within the scope of the four types of art. All in all, in the epistemological interpretation, these axioms or beliefs should be conceived syntactically, i.e. one should abstract from their denotation, think of them as performative utterances and as exerting an influence on

⁴⁵ K. Chrobak, “What Plurality of Realities? Some Critical Remarks on the Philosophy of Leon Chwistek”, *Polish Journal of Philosophy* 6/1 (2012), p. 7–25.

artistic practice.⁴⁶ But if we accept Kostyrko's logical interpretation and the satisfiability relation between a reality (a model) and a worldview, then this (i.e. the existence of non-empty common domain) may not be the case. A model (a reality) satisfies a worldview, which means that it satisfies all the axioms therein. A model (a reality) satisfies a conjunction of axioms comprising a worldview. Since the theory of the plurality of realities is created according to the principle (P2) (for every reality \mathbf{R} and for at least one axiom a satisfied by \mathbf{R} , there is an axiom $\sim a$ satisfied by a reality different from \mathbf{R}), then all four models or realities involve mutually disjoint universes. This is because there is no model which satisfies contradictory statements and there is no object which has two mutually exclusive properties at the same time. Hence there is no common domain and there is no denotation common to all four worldviews. (My proof that, within the scope of Kostyrko's interpretation, realities are disjoint is currently under review. However, the proof can be abbreviated. Consider just phenomenalist and realistic reality and the denotations (extensions) of their axioms (here, in bold letters). We have an empty intersection: $\mathbf{1} \cap \mathbf{2} \cap \mathbf{3a} \cap \mathbf{1} \cap \mathbf{2} \cap \mathbf{3b} = \emptyset$, because $\mathbf{3a} \cap \mathbf{3b} = \emptyset$, since $(\mathbf{3a})$ iff $(\sim \mathbf{3b})$) This contradiction may be resolved if we decide – where artistic practice is concerned – whether what underlies types of art are simply worldviews or their denotations/semantics. On one hand, axioms within these worldviews are beliefs, which, as such, influence artistic practice. On the other hand, these axioms denote the ranges of the means which an artist uses.

4. Conclusion

Despite the aforementioned contradiction, it can be concluded that Chwistek's thought provides some premises for the original idea of ontology as a logical foundation of aesthetics. The

⁴⁶ Otherwise, i.e. when one is concerned with their denotation, there is no common domain.

idea indicates that ontological beliefs determine the sets of means an artist can use in his/her practice. It may also indicate that these ontological beliefs, as beliefs, direct this practice. The ontological beliefs may also be considered as the necessary conditions for creating art.

Chwistek also considers transitional types of art, e.g. “Titian could ... be considered the transitional type between primitivism and realism”.⁴⁷ There may be conceived six transitional types of art, based on the four main types. This poses the problem of the realities grounding these transitional types, which, however, lies beyond the scope of this article.

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⁴⁷ L. Chwistek, *The Plurality of Realities in Art*, p. 156.

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