

Toward an Epistemology of Art

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Abstract: An epistemology of art has seemed problematic mainly because of arguments claiming that an essential element of a theory of knowledge, truth, has no place in aesthetic contexts. For, if it is objectively true that something is beautiful, it seems to follow that the predicate “is beautiful” expresses a property – a view asserted by Plato but denied by Hume and Kant. But then, if the belief that something is beautiful is not objectively true, we cannot be said to know that something is beautiful and the path to an epistemology of art is effectively blocked. The article places the existence aesthetic properties in the proper context; presents a logically correct argument for the existence of such properties; identifies strategies for responding to this argument; explains why objections by Hume, Kant, and several other philosophers fail; and sketches a realization account of beauty influenced by Hogarth.

Keywords: epistemology of art, aesthetic properties, the problem of universals, realization, Plato, David Hume, Immanuel Kant

1. Preliminaries

Philosophers have argued that truth, an essential component of any theory of knowledge, has no place in aesthetic contexts, thereby raising a seemingly decisive objection to efforts aimed at formulating an epistemology of art. Thus, while some philosophers might agree that we can be justified in believing that something is beautiful, others would categorically deny that such beliefs are objectively true because this would be to grant that there is such a property as being beautiful. But, it has been argued, there is no such property as being beautiful. In fact, there are no aesthetic properties at all; it's just a *façon de parler*. If aesthetic judgments are not objectively true, the path to an epistemology of art seems effectively blocked.

As a sculptor and a philosopher, I consider the formulation of an epistemology of art¹ essential to building a philosophical foundation for my artwork.² Accordingly, I will defend the thesis that there are aesthetic properties. I will do so by reference to what has traditionally been considered the archetypal aesthetic property, beauty – for me the key goal of art. The defense I will present will cover aesthetic properties generally.

¹ Cusmariu 2012 and Cusmariu 2016 present and defend an epistemology of science and mathematics. Whether a semantic epistemology of art is attainable is discussed in the last section of this article.

² Cusmariu 2009, Cusmariu 2015a, and Cusmariu 2015b explain why such a foundation is important.

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The article proceeds as follows:

Sections 2 and 3 place the issue at hand in the proper context³ by presenting in technical detail a Platonist solution to a key aspect of the problem of universals.

Section 4 presents a logically correct argument to show that beauty is a property, which can be generalized to all aesthetic properties.

Section 5 lists challenges to the soundness of this argument discussed later.

Section 6 explains the distinction between the analysis of predication and the analysis of predicates, whose significance is made clear subsequently.

Sections 7-16 state and then answer objections to beauty as a property raised in the following works: Hume 2008 [1757], Kant 1987 [1781], Ayer 1946, Scarry 1999, Zangwill 2001, McMahan 2007, and Scruton 2009.

Section 17 sketches a realization account of beauty in general terms and Section 18 follows up with details based on the views of William Hogarth.

Finally, Section 19 explores the prospects for a semantic epistemology of art.

2. The Problem of Universals: A Key Aspect

Four clearly distinct meanings of “is” require philosophical analysis:

- (i) the “is” of predication, e.g., “7 is a prime number;”
- (ii) the “is” of existence, e.g., “there is a number greater than 5;”
- (iii) the “is” of identity, e.g., “7 + 5 = 12;” and
- (iv) the “is” of composition, e.g., “a chair is a seat, back, legs and arm rests.”

Analysis of predication entails completing the schemas,

- (1) $\forall x(Fx \equiv \text{---})$
- (2) $\forall x_1 \dots x_n(R(x_1 \dots x_n) \equiv \text{---})$,

where “ Fx ” is any meaningful monadic predicative open sentence and “ $R(x_1 \dots x_n)$ ” is any meaningful relational predicative open sentence.⁴

3. A Platonist Solution

Platonism completes (1) and (2) by appealing to “one over many” properties and relations (in intension) understood as abstract, non-contingent *universalia ante*

³ In *Art & Abstract Objects*, editor Christy Mag Uidhir (2012, 1) comments: “... aesthetics has long cultivated a disturbingly insular character ...” I entirely agree. This is one of the points of this article.

⁴ The term “meaningful” is used here without any commitment to a theory of meaning or meaningfulness.

rem independent of mind, time, space, and empirical reality in general – what Frege called “the third realm” (Frege 1956 [1918], 302):

(1*) $\forall x(Fx \equiv x \text{ exemplifies } F\text{-ness})$

(2*) $\forall x_1 \dots x_n(R(x_1 \dots x_n) \equiv \langle x_1 \dots x_n \rangle \text{ exemplifies } R\text{-ness})$

Platonism interprets (1*) and (2*) as quantifying over properties and relations (in intension),⁵ allowing substitutions for “ Fx ” in (1*) and “ $R(x_1 \dots x_n)$ ” in (2*) whatever degree of latitude is necessary for a general analysis of predication. Thus, truth-values are properties of propositions (Frege 1970 [1892]); mathematics studies properties and relations of and between abstract objects, including properties and relations themselves (Gödel 1944); and laws of nature are causal or probabilistic relations between generic events understood as property exemplifications (Kim 1976; Brown 1992).

Restrictions on (1*) are needed to block counterexamples such as the equivalence class Bertrand Russell discovered that bears his name (Russell 1967[1902], 124-125). The Russell sentence “ $\sim(x \text{ exemplifies } x)$ ” is a meaningful monadic predicative open sentence, hence may be substituted for “ Fx ” in (1*) but fails to express a property because a contradiction follows from this substitution.⁶ Under Platonism, no restrictions are placed on (1*) and (2*) beyond logical form and those required to secure consistency.

Only unbridled Platonism, which I hold (cf. Bealer 1982; Tooley 1977; Wolterstorff 1970), can solve the problem of universals for the whole of science and mathematics (cf. Whitehead 1925; Church 1951; Penrose 2005).⁷ Unbridled Platonism entails the existence of properties and relations of any type or complexity whatever.

Popular ways of begging the question against Platonist *universalia ante rem* is to assert that existence of properties and relations depends on whether:

(a) they are exemplified or exemplifiable;

⁵ Shapiro 1991 covers technical issues involved in such quantification.

⁶ I discuss this problem informally in Cusmariu 1978a and more formally in Cusmariu 1979b. Three other problems for Platonism, negative existentials, the Bradley-Ryle exemplification regress and the “Third Man” argument are discussed in Cusmariu 1978b, 1980, and 1985, respectively. A recent attack on abstract entities (Dorr 2008), considers the Bradley argument definitive (44), evidently unaware that, as shown in Cusmariu 1980, Platonism can easily escape the regress. Briefly: there is no infinite regress of exemplification relations because, being a recurring universal, the same exemplification relation holds throughout, so all stages of the regress collapse into one; even if there were such a regress, an infinity (denumerable or not) of relations is not vicious under Platonism; finally, to insist on a different exemplification relation at every stage of the regress is to beg the question against “one over many” Platonism.

⁷ Predication is implicit in the $\varphi(x)$ condition of the comprehension schema of Zermelo-Fraenkel (ZF) set theory, $(\exists y)(x)(x \in y \leftrightarrow x \in \nu \ \& \ \varphi(x))$. Only unbridled Platonism meets the requirement that attributes match the logical complexity of predicative open-sentence substitutions of $\varphi(x)$ in the language of ZF.

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- (b) they are related causally, counterfactually, or probabilistically to anything;
- (c) exemplification is contingent or necessary, analytic or synthetic;
- (d) exemplification supervenes on the exemplification of other properties;
- (e) exemplification is “objective,” “subjective,” “contextual,” or “conceivable;”
- (f) exemplification is inferable from other properties an object might have;
- (g) exemplification is justified only if some other property is exemplified;
- (h) an empirical test exists or can be devised for observing exemplification;
- (i) any of (a)-(h) are justified, a priori or a posteriori.

4. Proving That Beauty is a Property

What about “ x is beautiful”? This is a meaningful monadic open sentence in which the copula has predicative meaning, hence its account falls under (1*):

(1*a) $\forall x(x \text{ is beautiful} \equiv x \text{ exemplifies } Beauty)$

However, Platonism formally implies the existence of *Beauty* as the property exemplified by all and only beautiful objects if and only if substituting “ x is beautiful” for “ Fx ” in (1*) yields a consistent sentence. (1*a) seems to be a consistent sentence. The question whether beauty is a property, then, has an easy answer under unbridled Platonism: it is the same as the answer to every question whether an open sentence expresses a property. On this view, the ontology of “ x is beautiful” is nothing special. The same is true of every meaningful open sentence of the form “ x is F ” where “ F ” is an aesthetic predicate.

The existence of *Beauty* can be proved by a simple argument:

(AC1) If “ Gx ” is a meaningful monadic predicative open sentence and the result of substituting “ Gx ” for “ Fx ” in (1*) is a consistent sentence, then there is a property expressed by “ Gx .”

(AC2) “ x is beautiful” is a meaningful monadic predicative open sentence and the result of substituting “ x is beautiful” for “ Fx ” in (1*) is a consistent sentence.⁸

Therefore,

(AC3) There is a property expressed by “ x is beautiful,” *being beautiful*.

5. Challenging the Argument

Those who wish to reject the conclusion of a logically correct argument must offer grounds for rejecting its premises, in this case (AC1) or (AC2).

⁸ Syntactically, “ x is beautiful” is the simplest member of an equivalence class of open sentences that includes, e.g., $(y)(y = x \rightarrow y \text{ is beautiful})$, meaning that the consistency requirement must apply to the entire equivalence class. This is complex technical issue best left to a paper with a different scope.

(AC1) is a conditional, so the simplest strategy in the present context is to grant that the (conjunctive) antecedent of (AC1) is true for “x is beautiful” and show that the negation of the consequent is true for “x is beautiful.” That is, show the following:

(AC1.1) There is no property expressed by “x is beautiful.”

(AC2) is a conjunction, so there are two strategies for challenging it. The first strategy is to show that the negation of the first conjunct is true:

(AC2.1) “x is beautiful” is not a meaningful monadic predicative open sentence.

The second strategy is to show that the negation of the second conjunct is true:

(AC2.2) The result of substituting “x is beautiful” for “Fx” in (1*) is not a consistent sentence.

Strategies for defending (AC1.1) discussed below in connection with the objections of philosophers named earlier are:

(AC1.11) “x is beautiful” does not express a property because aesthetic judgments only describe attitudes or states of mind and are intended to evoke responses.

(AC1.12) “x is beautiful” does not express a Platonist property because aesthetic properties can be analyzed in terms of “projections of sentiment.”

(AC1.13) “x is beautiful” does not express a Platonist property because beauty does not exist independently of mind; beautiful objects; or properties common to all and only beautiful objects.

(AC1.14) Science does not recognize the property of being beautiful.

(AC1.15) “x is beautiful” does not express a property because a property provides information relevant to object recognition or to an object’s function or purpose; *being beautiful* provides no such information.

(AC1.16) “x is beautiful” does not express a property because this property is not the reason why things are beautiful.

(AC1.17) If “x is beautiful” expresses a property, then we must analyze it in terms of properties had by all beautiful things; but this is unwarranted.

I am not aware of anyone who has adopted strategies (AC2.1) or (AC2.2). I will skip the latter but will discuss the former in the case of Hume and Kant because of the opportunity to apply tools of modern logic to the views of two great and influential philosophers.

It is beyond the scope of an article such as this to discuss the following claims:

(i) “x is beautiful” does not express a Platonist property because there are no abstract objects of any kind.

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(ii) Sentences containing an apparent reference to the property of being beautiful can be paraphrased into logically equivalent sentences without such reference.

(iii) An adequate theory of the aesthetic dimension is possible without assuming there is such a property as being beautiful, or any other aesthetic property.

6. A Basic Distinction Explained

Though the term “aesthetics” is a 17th century invention (Baumgarten 2013 [1739], §533, 205) the subject itself has been in philosophy ever since Plato put beauty on the philosophical map. He singled it out as a special form and placed it alongside truth and justice at the foundations of civilization.

When we apply Plato’s Theory of Forms to the problem of universals, we find that the ontological status of beauty, truth, and justice is the same – indeed, no different from that of other forms. A conundrum arises: How can the ontology of these forms be the same when the analyses of the forms themselves are so very different, belonging to three branches of philosophy: aesthetics, epistemology, and ethics?

The appearance of inconsistency can be dispelled by drawing a basic distinction between the analysis of predication and the analysis of predicates.

(AP1) “*x is beautiful*,” “*x is true*” and “*x is just*” univocally express monadic predication, which Platonism analyzes according to (1*) as exemplification of *Truth, Justice* and *Beauty*. Flowers are beautiful, sentences (propositions, beliefs, statements) are true, and actions are just in the same sense of “are.” Moreover, the ontology of the forms involved must be treated the same way under the Theory of Forms for a simple and technically sound reason: quantifiers must be given the same interpretation for all objects so that the system can define rules of inference for quantifiers (the usual four). “There is” must have the same interpretation in “there is a property all and only beautiful things have in common,” “there is a property all and only true sentences have in common” and “there is a property all and only just acts have in common” even though the properties in question are different and are exemplified by objects of different categories.

(AP2) Logically separate from the analysis of predication and its ontology is the analysis of predicative content, e.g., how the predicate “*F*” in “*x is F*” is to be analyzed and even whether such an analysis is possible, necessary or justified. It would be irrelevant to object to an analysis of predication or its ontology by raising problems for an analysis of predicative content. Thus, while Plato proposed an analysis of what it is to be just as well as an analysis of the form justice, he might well not have done both. It would be irrelevant to object to the Theory of Forms as an analysis of predication in “*x is just*” by raising problems for Plato’s principle of non-interference in his analysis of justice.

7. Hume 2008 [1757]: Objection Answered

Hume stated the following in a famous and often-quoted passage:

Beauty is no quality of things themselves: it exists merely in the mind which contemplates them; and each mind perceives a different beauty. To seek the real beauty is as fruitless as to pretend to ascertain the real sweet or real bitter. (2008 [1757]: 136-137).⁹

Objection: There is no property expressed by “x is beautiful” because beauty exists merely in the contemplating mind.¹⁰

Comment: The argument below is a reconstruction using modern terminology to make Hume’s objection easier to grasp in the present context.

(H1) Beauty exists merely in the contemplating mind.

(H2) If beauty exists merely in the contemplating mind, then the open sentence “x is beautiful” is not objectively true of anything.

(H3) If the open sentence “x is beautiful” is not objectively true of anything, then it is not a proper substitution in the abstraction schema for properties (1*).

(H4) If the open sentence “x is beautiful” is not a proper substitution in the abstraction schema for properties (1*), then the open sentence “x is beautiful” does not express a property.

Therefore,

(H5) The open sentence “x is beautiful” does not express a property.

Reply: (H3) is false. An open sentence need not be objectively true of anything to be a proper substitution in the abstraction schema for properties (1*). It is sufficient that the open sentence “x is beautiful” is meaningful, monadic, and its substitution does not lead to contradiction. The Humean condition would severely hamstring (1*) as part of the solution of the problem of universals.

8. Restating Hume’s Objection

Comment: The objection below was not available to anyone writing philosophy during the 18th century. I raise it only to answer what I think is an interesting “what if” question. The same applies to the restatement of Kant’s objection in Section 10.

Objection: “x is beautiful” does not express a property because this sentence is not monadic; hence it is not a proper substitution in the abstraction schema (1*).

⁹ Hutcheson 1973 and Burke 1958 held a similar view.

¹⁰ Another discussion of Hume’s objection is Mothersill 1984, 177-208. This book also approaches the question whether beauty is a property without regard to the problem of universals; nor is there an effort to extract technically detailed arguments from Hume (or Kant, Mothersill 1984, 209-246.)

A promising approach here is Russellian (Russell 1905): Show that the apparent logical form of “ x is beautiful” is not its real form. That is, appearances to the contrary notwithstanding, the logical form of “ x is beautiful” is not monadic. The argument would go this way: Propose an analysis showing the logical form of “ x is beautiful” to be very different from what it seems to be – call it H^* – such that H^* may no longer be substituted for “ Fx ” in (1*), thus blocking the existence of the property *being beautiful*.

What, then, is the logical form of “ x is beautiful” that Hume can be construed as proposing? His comment that beauty “exists merely in the contemplating mind” suggests that the logical form of “ x is beautiful” can be rendered not as monadic but rather as relational because the relational terms “considered” and “contemplates” occur in it:

(H^*) “whoever contemplates x considers x to be beautiful.”

Thus, substituting (H^*) for “ Fx ” in (1*) is inappropriate because only monadic substitutions are allowed, whereas (H^*) seems not to have that form.

Reply: Let us make the logical form of (H^*) explicit:

(H^{**}) “(y)(y contemplates $x \rightarrow y$ considers x to be beautiful).”

What determines the degree (power) of an open sentence is the number of variables occurring free in it, as decided by Frege’s development of quantification theory. (H^{**}) contains only one free variable, “ x .” The fact that this variable occurs twice, once on each side of the conditional, does not mean that (H^{**}) is not monadic, nor is it relevant that relational terms occur in it. Therefore, (H^{**}) may legitimately be substituted for “ Fx ” in (1*), resulting in the property *being considered to be beautiful by whoever contemplates it*. Of course, from the fact that this property is exemplified it does not follow that anything is beautiful, just as Hume correctly implied.

However, the issue is whether the existence of the property *being beautiful* follows from the existence of the property *being considered to be beautiful by whoever contemplates it*. Further analysis is necessary to make this clear. In a paper of this scope I can only explain informally how syntactical requirements on substitution in (1*) would handle logically complex open sentences such as (H^{**}).

The consequent of (H^{**}), where the aesthetic predicate “beautiful” occurs, is ambiguous between a *de re* interpretation,

($H^{**}a$) “ y considers x to be beautiful,”

and a *de dicto* interpretation

($H^{**}b$) “ y considers that x is beautiful.”

($H^{**}a$) shows a relation between a person, an object and a property as an instance of *de re* attitudes, which are triadic. Therefore, on the *de re* interpretation of (H^{**}), the complex property *being considered to be beautiful by*

whoever contemplates it has the property *being beautiful* as a constituent; hence the existence of this property follows.

In (H**b) monadic predication occurs in the propositional clause owing to the predicative use of the copula. When this use is analyzed as part of a solution to the problem of universals, the existence of the property *being beautiful* follows. Thus, the property *being beautiful* is a constituent of the complex property *being considered to be beautiful by whoever contemplates it* under a *de dicto* interpretation as well.

Therefore, the existence (not exemplification) of the property *being beautiful* follows from the existence of the property *being considered to be beautiful by whoever contemplates it*. Modern logic does not help Hume avoid having to grant that there is a property expressed by “*x* is beautiful.”

Counter: Another parsing of “*x* is beautiful” that would change its logical form in a way that is consistent with Hume’s view on the nature of aesthetic judgments is this:

(H***) “Pleasurable sensations are experienced while contemplating *x*.”

Reply: (H***) won’t do because pleasurable sensations can be experienced in contexts having nothing whatever to do with beauty or any other aesthetic property. Changing logical form does not render a parsing immune to counterexamples.¹¹

Counter: Perhaps Hume can complicate the parsing of “*x* is beautiful” slightly:

(H***) “Pleasurable sensations are experienced while contemplating *x* aesthetically.”

Reply: (H***) won’t do because predication of “beautiful” is embedded in the true counterfactual this parsing entails: “Were it not for the fact that *x* is beautiful or has aesthetic value or has properties that are beautiful or have aesthetic value, *x* would not invite aesthetic contemplation.” Counterfactuals have properties as constituents by virtue of predication as well. Thus, a proposition expressed by a sentence of the form “were it not for the fact that-*p*,” it would not be the case that-*q*” entails the existence of whatever properties are entailed by predication implicit in *p* and *q*, as we already saw in (H**b). Finally, there is the very real possibility that pleasurable sensations could be experienced while contemplating aesthetically something grotesque. It is easy to find examples in modern art that prove the inequivalence of “*x* is beautiful” and (H***)a).

¹¹ Ramsey’s comment that Russell theory of descriptions as a “paradigm of philosophy” (Ramsey 1965, 263) is true also in this sense: The theory contained the novel methodological insight that the analysis of logical form requires nothing less than logically necessary and sufficient conditions. On methodological aspects of Russell’s theory, see Black 1944, 242-244.

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I conclude that a Russellian construal of Hume's view that "beauty exists merely in the mind which contemplates them" does not show that "x is beautiful" is not a proper substitution in (1*). It appears that modern logic cannot rescue Hume.

9. Kant (1987 [1781]): Objection Answered

Remarks at several junctures of the *Critique of Judgment* indicate that Kant agrees with Hume on fundamental issues regarding judgments of taste:

A judgment of taste is not a cognitive judgment and so is not a logical judgment but an aesthetic one, by which we mean a judgment whose determining basis *cannot be other than subjective*. (Kant 1987 [1781], §1, 204)

He will talk about the beautiful as if beauty were a characteristic of the object and the judgment were logical (namely a cognition of the object through concepts of it) even though in fact the judgment is only aesthetic and refers the object's presentation merely to the subject. (Kant 1987 [1781], §6, 211)

Just as if, when we call something beautiful, we had to regard beauty as a characteristic of the object, determined in it according to concepts, even though in fact, apart from a reference to the subject's feeling, beauty is nothing by itself. (Kant 1987 [1781], §9, 218)

Objection 1: "x is beautiful" does not express a property because judgments of beauty only refer to feelings experienced in reaction to an object's presentation.

Reply: Kant's views about the nature of judgments of taste appear *prima facie* to be equivalent to Hume's. Thus, we could generate a Kantian argument for the conclusion that "x is beautiful" does not express a property with only slight revisions of the Humean argument presented above:

(K1) Judgments of beauty only refer to feelings experienced in reaction to an object's presentation.

(K2) If judgments of beauty only refer to feelings experienced in reaction to an object's presentation, then the open sentence "x is beautiful" is not objectively true of anything.

(K3) If the open sentence "x is beautiful" is not objectively true of anything, then it is not a proper substitution in the abstraction schema for properties (1*).

(K4) If the open sentence "x is beautiful" is not a proper substitution in the abstraction schema for properties (1*), then the open sentence "x is beautiful" does not express a property.

Therefore,

(K5) The open sentence "x is beautiful" does not express a property.

Reply: (K3) is still false and for the same reasons as before.

10. Restating Kant's Objection

Objection 2: "x is beautiful" does not express a property because this sentence is not monadic; hence it is not a proper substitution in the abstraction scheme for properties (1*).

Kant has available in his aesthetic theory resources that may allow him to defend this objection for different reasons.¹²

Judgments of taste are part of Kant's effort to explain how judgments in general are possible – the possibility of judgment being a key concern in all three *Critiques*. Judgments of taste are possible, says Kant, only after a kind of conceptual purity has been achieved at the last of four "moments" – a notoriously difficult concept to interpret that I can only sketch here (cf. Allison, Guyer, and Wenzel).

In the first moment, one frees the mind of expectations of personal gain. This poses significant challenges because it runs counter to the mindset required to accomplish goals needed for survival. With self-interest switched off, one moves on to the second moment, where creativity occurs in the form of free play of the imagination. In the third moment, one withholds the application of concepts related to objects of aesthetic appreciation, including concepts related to purpose or function. Having reached the fourth moment, one is now "open" to the aesthetic dimension and judgments of taste are possible, i.e., seeing an object only as an aesthetic "end-in-itself."¹³

If Kant is to block the substitution of "x is beautiful" for "Fx" in (1*) under a Russellian variant of strategy S3, he must also supply an explanation of why this open sentence does not have a logical form that implies the existence of *being beautiful*.

The four moments together with Kant's views on judgments of beauty suggest the following parsing of "x is beautiful:"

(K*) "x is an object of disinterested and purpose-free satisfaction unmediated by concepts."

However, (K*) fails to capture the subjectivist aspect of beauty in the Kant quotes above. Let us also be explicit about the logical structure of (K*):

(K**) "(y)(if y is a person, then x is an object of disinterested and purpose-free satisfaction unmediated by concepts for y.)"

(K**) is a meaningful open sentence in one free variable, hence may be substituted for "Fx" in (1*). The result is the complex property *being the object of*

¹² In light of the "antinomy of taste" (Kant 1987: §5), S3 may be an option for Kant as well; how exactly is beyond the scope of this article. An insightful recent discussion of the antinomy is Allison 2001, Ch. 11.

¹³ Kant's description of the four moments suggests he is an aesthetic attitude theorist in a sense that leaves him open to well-known objections (Dickie 1964).

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disinterested and purposeless satisfaction unmediated by concepts for any person, which does not seem to entail the property being beautiful.

Reply: The inequivalence of (K**) and “x is beautiful” leaps to the eye. We can easily choose aesthetic predicates other than “beautiful” and find cases of “disinterested and purpose-free satisfaction unmediated by concepts for a person.”

Counter: Kant can try to block the substitution of “x is beautiful” for “Fx” in (1*) on grounds of logical form without claiming equivalence between (K**) and “x is beautiful,” regarding which here are three options.

Option 1: A deductive argument with the conclusion,

(C) “x is beautiful” is not a monadic predicative open sentence.

Give his fourth-moment view about the possibility of aesthetic judgments, the premise Kant has available to support this conclusion is,

(P1) x is an object of disinterested and purpose-free satisfaction unmediated by concepts for a person.

However, P1 is insufficient for a valid inference to (C). To secure validity, a second premise would be needed, such as

P2. If x is an object of disinterested and purpose-free satisfaction unmediated by concepts for a person, then “x is beautiful” is not a monadic predicative open sentence.

Reply: The problem here is that the logical form of sentences about an object x does not depend on psychological factors about the sort of attention that a person can direct upon x. Thus, Kant is open to Frege’s critique of psychologism (Frege 1974 [1884]), which warns against going from psychology to logic. So Option 1 is a failure.

Option 2: Assert a non-logical relation R between “x is beautiful” and “x is an object of disinterested and purpose-free satisfaction unmediated by concepts for a person,” such that “x is beautiful” features neither monadic nor relational predication owing to bearing R to “x is an object of disinterested and purpose-free satisfaction unmediated by concepts for a person.”

Reply: The problem here is that it is not easy to say what R might be. A possible candidate is supervenience. However, supervenience is usually understood (Kim 1984, 1990) as a relation between sets of properties, not properties taken singly. Second, if Kant chose to redefine supervenience to hold between properties, he would have to agree that “x is beautiful” expressed a property, which is precisely what he is trying to deny! In any case, even if a suitable definition of property-property supervenience could be formulated according to which judgments of taste supervened on satisfying disinterested and purpose-free satisfaction unmediated by concepts for a person, it would not follow that the logical form of judgments of taste supervened on the conditions that must be satisfied in order for someone to be in position to make such

judgments. Supervenience is also a non-starter. What this relation *R* might be remains a mystery. Option 2 also fails.

Option 3: Kant could give up on “*x* is an object of disinterested and purpose-free satisfaction unmediated by concepts for a person” as the logical form of “*x* is beautiful” and try to block substitution of “*x* is beautiful” for “*Fx*” in (1*) by regarding the logical form of judgments of taste as inferable from the three moments prior to the fourth – where, by definition, one is not yet in a position to make judgments of taste, including whether something is beautiful.

Reply: The problem here is that, unlike truth and justification, logical form is not the sort of property that can be passed from step to step even in a deductive sequence. So, Kant is not entitled to expect the logical form of “*x* is beautiful” to be other than monadic in the fourth moment just because (assuming for the sake of argument) it is not monadic in the three prior moments.

I conclude that Kant’s four-moment theory of aesthetic judgments does not show that “*x* is beautiful” is not a proper substitution in (1*). It seems that modern logic cannot help rescue Kant either.

11. A Different Problem for Kant

Kant’s “disinterested purposelessness unmediated by concepts” constraint is beset by a serious problem that is independent of whether he can block substitution of “*x* is beautiful” for “*Fx*” in (1*): Such a constraint would make it all but impossible to appreciate, let alone derive satisfaction from, the beauty of works of art that are conceptually challenging (Wenzel 2005, 70), some created in Kant’s own day.

Consider Beethoven’s String Quartet in F Op. 59 (1806), whose four sonata-form movements require grasping complex musical concepts to fully appreciate their beauty.¹⁴ Without the mediation of such concepts, this music will seem disconnected noise, as it did to contemporaries unfamiliar with the new idiom.¹⁵ It will not do to respond that appreciating such music involves technical rather than aesthetic judgments, which Kant can admit entail the mediation of concepts, because the beauty of technical innovation in matters of musical form is central to Beethoven’s music and musical form qualifies as an aesthetic property in its own right. Beethoven’s predecessors Mozart and Haydn went to great lengths to make it such; he strove to realize it in his own music as well.

¹⁴ Cf. Radcliffe (1965, 48-60) and Kerman (1979, 117-154). Bell (1913, 23-24) makes similar points in his observations on conceptual demands involved in music appreciation.

¹⁵ Kerman writes (1979, 119-120) “They [the Razumovsky Quartets, of which Op. 59 is No. 1] were the first great works by Beethoven to have been lost on their essential audience;” and later (153-154) about the same music: “In their own day they puzzled and even repelled listeners.”

An even more dramatic example is the *Grosse Fuge* in B-flat Op. 133 (1826), which achieves terrifying aesthetic effects by beautiful technical means, tearing tonality apart in a feat of virtuosity whose lessons took the rest of the 19th century, and beyond, to absorb. The paradox that is the *Grosse Fuge* drew the admiration of Stravinsky.¹⁶

It might be argued that Kant's theory has merit because it predicted the course of modern art, which took an abstract turn in the twentieth century. The beauty of abstract art can seemingly be appreciated only if viewers are willing to suspend mediation of concepts.¹⁷ What is closer to the truth, however, is that aesthetic appreciation in a modern art museum or a modern music concert need only suspend familiar concepts about sight and sound. These must be replaced not by a fourth-moment conceptual *tabula rasa* but rather by new and even more complicated concepts of tonality and form if what is seen and heard is to make sense, let alone be judged aesthetically.¹⁸

Tristan Tzara famously asked (1989 [1922], 248): "What good did the theories of the philosophers do us? Did they help us to take a single step forward?" I argued (Cusmariu 2009 and Cusmariu 2015) in the context of sculpture that conceptual change – and with it progress – in art is as real as it is in science. Those articles contain paradigm shifts to which mediation of concepts from ontology and epistemology is essential, to the artist during the creative process as well as the art lover seeking interpretation. As a working artist, my most serious reservation about Kant is that the third *Critique* makes no room even for the possibility of such developments. Philosophers writing on the arts need to keep this in mind, if only to avoid Barnett Newman's famous barb (Newman 1952) that "aesthetics is for me like ornithology must be for the birds."

12. Ayer 1946: Objection Answered

In a passage that echoes Hume and Kant, A.J. Ayer wrote:

Such aesthetic words as "beautiful" and "hideous" are employed, not to make statements of fact, but simply to express certain feelings and evoke a certain response. [T]here is no sense in attributing objective validity to aesthetic judgments. (Ayer 1946, 113)

Objection 1: "x is beautiful" does not express a property because the term "beautiful" is only used to express feelings and evoke a response, not to make a statement of objective fact.

¹⁶ Radcliffe notes (1965, 181) that Beethoven's late quartets at the time "were generally considered repellantly eccentric" and that the *Grosse Fuge* was "dismissed as an unintelligible freak" (121).

¹⁷ A new theory of abstraction in art is presented in Cusmariu 2015a.

¹⁸ Hume observed (2008, 151): "A common audience can never divest themselves so far of their usual ideas and sentiments, as to relish pictures which nowise resemble them."

Comment: To put Ayer's point in argument form, we need only restate slightly the Humean and Kantian arguments above:

(A1) People use the term "beautiful" to express feelings and evoke a response.

(A2) If people use the term "beautiful" to express feelings and evoke a response, then the open sentence "x is beautiful" is not objectively true of anything.

(A3) If the open sentence "x is beautiful" is not objectively true of anything, then it is not a proper substitution in the abstraction schema for properties (1*).

(A4) If the open sentence "x is beautiful" is not a proper substitution in the abstraction schema for properties (1*), then the open sentence "x is beautiful" does not express a property.

Therefore,

(A5) The open sentence "x is beautiful" does not express a property.

Reply: The problem, once again, is that (A3) is false. An open sentence need not be objectively true of anything to be a proper substitution in the abstraction schema for properties (1*). It is sufficient that the open sentence "x is beautiful" is meaningful and monadic.

Objection 2: Here is what Ayer has to say about universals:

The assertion that relations are universals provokes the question, 'What is a universal?'; and this question is not, as it has traditionally been regarded, a question about the character of real objects but a request for a definition of a certain term. Philosophy, as it is written, is full of questions like this, which seem to be factual but are not. (Ayer 1946, 58-59)

Reply: The problem of universals arises in part because of the need for "a definition of a certain term," i.e., the predicative meaning of the copula, whose analysis must be necessary and sufficient for science and mathematics as well as ordinary language. Such an analysis is not a simple matter.

13. McMahan 2007: Objections Answered

Echoing Hume, Kant and Ayer, Jennifer McMahan wrote:

Beauty is not a property of objects. A property is something that either exists independently of mind, like solidity or mass, or is a subpersonal response to properties that exist independently of mind, like color or shape. In addition, a property provides us with information relevant to object recognition, the object's function or some determinate purpose. Most succinctly, a property is a feature recognized by science. Beauty, on the other hand, is a subpersonal response to the perception of properties whose construal in perception pleases us. (McMahan 2007, 198-9)

There are three objections to consider here.

Objection 1: "x is beautiful" does not express a property independently of mind; but only exists as a "subpersonal response to the perception of properties whose construal in perception pleases us."

Reply 1: This is essentially a restatement of the views of Hume, Kant and Ayer presented above. The argument corresponding to McMahon's objection is subject to problems already indicated and as such need not be spelled out in detail.

Reply 2: McMahon's "subpersonal response to the perception of properties whose construal in perception pleases us" understates the effects of being in the presence of beauty. In a famous passage of the *Phaedrus* (1961, 251a, 497), Plato put it this way:¹⁹

But when one ... beholds a godlike face or bodily form that truly expresses beauty, first there come upon him a shuddering and a measure of that awe which the vision inspired, and then reverence as at the sight of a god, and but for fear of being deemed a very madman he would offer sacrifice to his beloved, as to a holy image of deity.

However, as Plato well understood, such accounts are a separate matter from the analysis of predication and its ontological implications. Unless reasons are given why aesthetic predication (not predicates) deserves special treatment, which McMahon does not provide, a schema such as (1*) applies and the argument above shows that "x is beautiful" does indeed express a property.

McMahon also begs the question against the Platonist conception of properties, according to which all properties, including aesthetic ones, are abstract objects existing independently of mind, as *universalia ante rem*. Beauty exemplars might well cause a "subpersonal response" in us but this does not mean that the existence of the property itself is contingent upon a "subpersonal response" to instances of it. The objection also begs the question against Platonism in requiring properties to be properties of something, which rejects the Platonist distinction between existence and exemplification. Finally, turning psychological concepts such as "existing independently of mind" and "being a subpersonal response to properties that exist independently of mind" into restrictions on substitutions for "Fx" in (1*) severely limits this schema as a general solution to the problems of universals.

Objection 2: "x is beautiful" does not express a property because science does not recognize beauty as a property.

Reply: It is stating the obvious that aesthetic sentences are not (yet?) sentences of science. But so what? The ontological status of aesthetic properties is determined by an abstraction principle such as (1*), not by empirical science. In any case, science does recognize beauty as a property. Scarry (1999, 52) says as much. Physicists Paul Dirac and Hermann Weyl took beauty very seriously (Farmelo 2002, 158; Chandrasekar 1987, 65). The Dirac equation – where space and time, energy and momentum, appear on an equal footing – is beautiful in an abstract, mathematical sense, making it reasonable to suppose that its exemplification in nature is beautiful in an empirical sense in light of the general

¹⁹ For a cinematic portrayal of what Plato had in mind, see Cusmariu 2015b, 98.

metaphysical relation under Platonism (Penrose 2005) between things mathematical and things empirical, borne out by modern physics. Moreover, logicians and mathematicians routinely attribute aesthetic properties such as elegance to proofs.

Objection 3: “*x* is beautiful” does not express a property because a property provides information relevant to object recognition or to the object’s function or purpose; *being beautiful* provides no such information.

Reply: This requirement is much too strong. It rules out properties closed under the usual Boolean operations: (a) conditional properties such as *being colored if red*; (b) properties everything has such as *being red or not red*; (c) properties nothing has such as *being a unicorn*; (d) properties nothing can have such as *being odd and even*; (e) vague properties such as *being taller than someone* and *having less money than last year*; and (f) properties expressed by what George Boolos (1998, 57) has called “nonfirstorderizable” sentences such as “being a man who walked into a room unaccompanied by anyone else,” which could be true of several people at the same time. Counterexamples could be easily multiplied. Moreover, if McMahan is understood to use “property” generically to include relations, a list of counterexamples is easily compiled once again. *Being taller than at least one other person* provides no information “relevant to object recognition or to the object’s function or purpose;” nor does *sitting next to someone at the movies*.

Platonist schemas (1*) and (2*) allow any meaningful monadic open sentences to be substituted in (1*) and any meaningful relational open sentences to be substituted in (2*) for sound philosophical reasons: to have available an analysis of predication suitable for any context whatever. Adding an informativeness requirement hamstrings (1*) and (2*) to the point where they can no longer offer truly general solutions to the problem of universals, including, as noted, science and mathematics.

14. Scarry 1999: Objections Answered

Elaine Scarry writes:

At no point will there be any aspiration to speak in these pages of unattached Beauty, or of the attributes of unattached Beauty. But there are attributes that are, without exception, present across different objects (faces, flowers, birdsongs, men, horses, pots, and poems) one of which is this impulse toward begetting. It is impossible to conceive of a beautiful thing that does not have this attribute. (Scarry 1999, 9)

Scarry also raises two objections here and a third later in the book.

Objection 1: “*x* is beautiful” does not express a property of the sort that exists “unattached” to beautiful objects.

Reply: Aristotle’s seems to have held such a view of properties in general – known as *universalia in rem*. Though the context of Scarry’s comment is aesthetics, the implication seems to be that an Aristotelian account of

predication works just as well as a Platonist one; that “unattached Beauty” as an *ante rem* property is dispensable. This is certainly not the case, as Cusmariu 1979a shows. Nor is it the case that predication can be analyzed piecemeal, in terms of *ante rem* properties and relations in one context and *in rem* properties and relations in other contexts such as aesthetics.

Objection 2: The property “x is beautiful” expresses is such that we cannot conceive of a beautiful object without an “impulse toward begetting.”

Reply: “Begetting” for Scarry means imitation or copying or replication, not what Plato found objectionable in the *Phaedrus*. While it may be true that people react in unique ways in the presence of a beautiful object and that such objects have special causal properties, this is neither necessary nor sufficient to an analysis of “beautiful” – counterexamples are easy to devise. “Begetting” does nothing to help us understand the ontological issues involved in solving the problem of universals, even in aesthetics.

Though familiar with Plato’s metaphysics, Scarry erroneously thinks that the role of beauty in the Theory of Forms is to “verify the weight and attention we confer” on beautiful exemplars and “justify or account for the weight of their beauty” (Scarry 1999, 47). As we saw, however, Plato’s analysis of predication in “x is beautiful” appeals to the property *being beautiful* as part of a general solution to the problem of universals.

Scarry writes (1999, 47):

The author of the *Greater Hippias*, widely believed to have been Plato, points out that while we know with relative ease what a beautiful horse or a beautiful man or possibly even what a beautiful pot is ... it is much more difficult to say what ‘Beauty’ unattached to any object is.

Objection 3: “x is beautiful” does not express a property of the sort that exists “unattached to” beautiful objects because this notion is hard to explain.

Reply: The author of the *Parmenides*, the *Republic* and the *Theaetetus* had no such difficulty when he proposed the Theory of Forms as a solution to the problem of universals. It is easy to specify categories of “unattached” properties: (a) logically impossible properties such as *being red and not red*; (b) physically impossible properties such as *moving faster than light*; (c) fictional properties such as *being a unicorn*; (d) extensionless properties such as *being the present King of France*; and (e) mereological oddities such as *being a sparkplug and an eyeball*.

15. Scruton 2009: Objections Answered

Roger Scruton writes:

The reader will have noticed that I have not said what beauty *is*. I have implicitly rejected a neo-Platonist view of beauty, as a feature of Being itself. God is beautiful but not for *this* reason. And I have avoided the many attempts to analyse beauty in terms of some property or properties supposed to be exhibited by all beautiful things. I have not discussed the tradition of thinking,

which again goes back to Plotinus and the neo-Platonists, which sees beauty as a kind of organic wholeness. (Scruton 2009, 195, original emphasis)

There are three objections here. Let us consider them in turn.

Objection 1: “x is beautiful” does not express a Platonist property.

Reply: Scruton’s characterization of Platonism as implying that beauty (or any other property) is a “feature of Being itself” and possesses “a kind of organic wholeness” is unnecessarily obscure. (1*) and (2*) are best characterized in technical terms as implying second-order quantification over properties and relations as part of a Platonist solution to the problem of universals. It won’t do to reject this solution out of hand as if the problem of universals is irrelevant in aesthetics.²⁰ Scruton has no solution to propose and appears unaware that the issue even needs to be addressed.

Objection 2: “x is beautiful” does not express a property because this property is not the reason why things are beautiful.

Reply: The Platonist schema (1*) is not about the reason why things are thus-and-such but rather about the analysis of monadic predication as part of a solution to the problem of universals. (1*) is about what it is to be F in the predicative sense, as distinct from the identity, existence, and composition senses. Moreover, analysis and explanation are logically independent concepts. It is consistent with (1*) to suggest an explanation of why things are beautiful in terms of properties exemplified by beautiful things – even in terms of properties understood non-Platonistically.

Objection 3: If “x is beautiful” expresses a property, then we must analyze it in terms of properties had by all beautiful things, but this is unwarranted.

Reply: This objection seems to confuse the analysis of predication with the analysis of predicates. The analysis of predication in “x is beautiful” entails nothing whatever about the analysis of the predicate “beautiful”; nor whether such an analysis is possible, desirable, necessary or justified; nor whether criteria exist by which to judge competing analyses; and so on. It is indeed a task in aesthetics to analyze aesthetic properties; but whether or not this is done, or how it is done, has no bearing on the ontological status of such properties.

16. Zangwill 2001: Objections Answered

Nick Zangwill writes:

Beauty does not stand alone. It cannot exist by itself. Things are beautiful because of the way they are in other respects. Beauty is a property that depends on other properties. Moreover, when we appreciate the beauty of a thing, we appreciate its beauty as it is realized in its other properties. For example, suppose we find a rose beautiful. What we find beautiful is a specific

²⁰ Zemach 1997 agrees with my top-down approach though he takes a different tack on the problem of universals. I find his critique of Platonism and his solution to the problem of universals unpersuasive but that is story for another time.

arrangement of colored petals, leaves, and stems. Beauty cannot float free of the way things are in other respects, and we cannot appreciate beauty except insofar as it is embodied in other respects. Beauty cannot be solitary and we cannot appreciate it as such. (Zangwill 2001, 1)

There are three objections to consider here.

Objection 1: “x is beautiful” does not express a property understood as existing independently of properties in virtue of which objects are beautiful.

Reply: This is a good place to distinguish several concepts of dependence.

Ontological-1: Where F and G are distinct properties, F depends on G =df Necessarily, F exists only if G exists.²¹ The obvious example is where G is a logical constituent of F . Thus, the property *being red and round* is ontologically-1 dependent on its two constituent properties, *being red* and *being round*. There is such a property as *being red and round* only if the properties *being red* and *being round* also exist.

Reply: Ontological-1 dependence is trivially true under Platonism. Once quantification over properties in (1*) has yielded F and G , which are non-contingent entities like all abstract object, it cannot happen that F exists but G does not, so that it is necessarily true that F exists only if G exists. The ontological-1 dependence of beauty on properties in which it is realized is harmless. It holds for every property derived from the predication schema (1*). All Platonist properties “float free” in the sense of being *ante rem*, including those on which beauty is ontologically-1 dependent, whatever they are.

Ontological-2: Where F and G are distinct properties, F depends on G =df Necessarily, F exists only if G is exemplified.

Reply: Zangwill does not seem to claim that beauty is ontologically-2 dependent on other properties. In addition to begging the question against Platonism, ontological-2 dependence would be a strange claim to make in the general case. For example, what other properties must be exemplified in order for the property *being round* to exist?

Ontological-3: Where F and G are distinct properties, F depends on G =df Necessarily, F is exemplified only if G is exemplified. This is the case for properties such as *being equilateral* and *being equiangular*.

Reply: The exemplification of beauty may well entail the exemplification of some other property (or properties). This, however, is consistent with the Platonist conception of *universalia ante rem*.

Analytical-1: Property F is dependent on a non-empty set of properties G (of which F is not a member) =df Necessarily, the exemplification of F is nothing over and above the exemplification of F by relation R between properties in the set G . To use Zangwill’s example, the beauty of a rose is nothing over and above the beauty of “a specific arrangement of colored petals, leaves, and stems.”

²¹ We must add “necessarily” because a material-conditional construal of “only if” is too weak.

Reply: This sense of dependence is consistent with Platonism because it does not entail that the existence of beauty is analytical-1 dependent on other properties. For that we need a stronger sense of analytical dependence.

Analytical-2: Property F is dependent on a non-empty set of properties G (of which F is not a member) =df Necessarily, the existence of F is nothing over and above the exemplification of F by relation R between properties in the set G . To use Zangwill's example again, the beauty of a rose is nothing over and above the beauty of "a specific arrangement of colored petals, leaves, and stems."

Reply: (a) Requiring the existence of a property to be analytically dependent-2 begs the question against Platonism, which rejects such a requirement on property existence, for any property. (b) In any case, even if we grant that "a specific arrangement of colored petals, leaves, and stems" unpacks the predicate "beautiful," this has no effect on the ontological status of the property of being beautiful. Zangwill is confusing the analysis of predication with an analysis of predicates.

Aesthetic: Property F is dependent on a non-empty set of properties G (of which F is not a member) =df aesthetic appreciation of F is nothing over and above appreciating whether "a specific arrangement of" the properties in G is F .

Reply: It may well be, as Zangwill says, that things are appreciated to be beautiful because of the way they are in other respects. As already noted, however, the ontological status of beauty is determined by quantification in schema (1*). Construing aesthetic dependence as an ontological replacement for (1*) comes dangerously close to ignoring the distinction between the analysis of predication and the analysis of predicates. Moreover, aesthetic dependence appears to be an epistemic concept; it is problematic to say the least that a valid ontological inference can be drawn from such a concept.

Nomological: Where F and G are distinct properties, F depends on G =df There is a law of nature connecting an event of which F is a constituent to an event of which G is a constituent.

Reply: Zangwill does not object to the existence of beauty on ground that it lacks a nomological connection to properties in virtue of which things are beautiful. I bring up nomological dependence in case a scientifically minded philosopher is tempted to deny the existence of beauty because (allegedly) there are no laws of nature connecting this property to other properties. The point to make is that nomological dependence holds for property exemplification, not property existence. In other words, laws of nature connect events, which are property exemplifications (Kim 1976), not properties themselves.

Objection 2: "x is beautiful" expresses a property only as a subjective response to certain physical features (color, shape, etc.) contingently associated with beauty.

Reply 1: This is close to the objections of Hume, Kant, Ayer and McMahan already answered above and as such does not require additional comment.

Reply 2: Platonism grants that judgments about exemplified beauty can be based on psychological factors that might as a matter of empirical fact vary from person to person; and even that disagreements about aesthetic preferences are not easily settled. However, these facts only apply to conditions under which exemplifications of beauty can be judged or observed, not to whether there is such a property as *being beautiful* – unless one (i) begs the question against Platonism; (ii) ignores the distinction between the analysis of predication and the analysis of predicates; or (iii) claims (falsely) that the subjectivity of some judgments justifies an inference regarding the ontological status of what the judgments are about.

Interestingly, Zangwill is not opposed to metaphysical entities as such. He considers supervenience (2001, 49) “... a relation between two families of properties, and therefore a metaphysical relation,” signaling acceptance of a realist metaphysics of relations. Why the supervenience relation can “stand alone,” “float free” and “be solitary” but properties – aesthetic or otherwise – cannot is unclear. This is clear: A predication schema for relations but not properties solves only half the problem of universals.²²

Later, Zangwill writes (2001, 19):

Talk of aesthetic properties does not necessarily involve a commitment to a realist metaphysics of aesthetic properties. There could be some kind of Humean analysis of aesthetic properties in terms of projections of sentiment.

Objection 3: “*x* is beautiful” does not express a property in the sense of commitment to a Platonist view of properties because aesthetic properties can be analyzed in terms of “projections of sentiment” as Hume suggested.

Reply: This confuses the analysis of predication with the analysis of predicates. Hume’s objections have already been answered.

17. A Realization Account of Beauty

Platonists are unsympathetic to a supervenient unpacking of the predicative content of “*x* is *F*,” where “*F*” is an aesthetic predicate, because we see no reason why non-aesthetic properties must necessarily “fix” aesthetic properties; nor why the exemplification of non-aesthetic properties must necessarily “fix” the exemplification of aesthetic properties. Much more congenial to our “one-over-many” view of aesthetic properties as a way of avoiding reductionism is the idea of realization. In this section I sketch a realization approach to *Beauty* in general terms and in the next section provide details based on the views of William Hogarth (2010 [1753]) that complements the general tenets of Platonism, leaving a full theory for another time.

²² Having found no theory of relations in Aristotle, Cresswell 1975 reconstructs only Aristotle’s view of properties. Cusmariu 1979a shows that Cresswell’s reconstruction is seriously flawed. Russell 1912 famously took Berkeley and Hume to task for ignoring relations in their rejection of abstract ideas.

Modern physics tells us in Platonist fashion (Penrose 2005, Ch. 1; Dirac 1977, 113; Whitehead 1925) that empirical reality is an approximation of mathematical reality. One construal of such a view is that abstract relationships asserted as true *simpliciter* in mathematical contexts are only approximately true under empirical interpretations, the stricter relationship being asserted in empirical contexts for ease of computation because we cannot replace the equality symbol = with the approximate equality symbol \approx for computational purposes. Thus, the equality sign in the Ideal Gas Law, $PV = NRT$, is not in laboratory practice identity in the strict Leibnizian sense but denotes approximate equality because of approximations on measurements of pressure, volume and temperature due to instrumental limitations and rounding in the value of the gas constant R , 8.3144621(75); the values in brackets are the uncertainty (standard deviation) in the last two digits of the value of R .

The realization view of beauty I wish to hold is very similar:²³

(R) An object a is beautiful if and only if where A is a set of properties of perfect or ideal form and B is a set of properties a , properties in B approximate properties in A .²⁴

Comment: A full analysis, beyond the scope of this article, would address the following issues: (a) which specific properties in set B are to approximate properties in the realization set A , and (b) what exactly is the meaning of property approximation.

To be beautiful, then, is to approximate maximal aesthetic greatness. The properties in the base set A are a sort of limit or upper bound, which the properties in set B approach but never reach, as Plato told us. Moreover, to say that a is more beautiful than b is to say that properties of a are a closer approximation of the properties in the base set A than properties of b .

The realization view of beauty is Baudelairean, who defined beauty (Baudelaire 1976, 636) as the infinite in the finite – *l'infini dans le fini*.

18. A Hogarthian Variant

A theory due to William Hogarth leads to a realization analysis of the predicative content of “ x is beautiful” along the above lines, though only as a sufficient condition of beauty in physical objects. Hogarth suggests that beauty is realized in S-shaped curvature appearing in an object, from the vantage point of the sagittal or coronal planes²⁵ (or both) in one or more of the following ways: (a) a sinuous line is suggested by the object’s posture, (b) a sinuous line traces the

²³ Shoemaker 2007 expounds a different view of property realization.

²⁴ This is a way of capturing Bell’s famous “significant form” concept (Bell 1913).

²⁵ The sagittal plane is the imaginary vertical plane dividing the human body (and other bilateral animals’) into left and right volumes that are approximate mirror images of one another. Orthogonal to the sagittal plane is the coronal plane, also top-to-bottom, dividing bilateral objects into front and back volumes.

object's boundary line, (c) a sinuous line traces the boundary line of its component parts, or (d) a sinuous line connects major parts. Hogarth associated S-shaped curvature with beauty on grounds that curvature signifies liveliness and activity, and thus attracts viewer almost instinctively as contrasted with straight, parallel, or right-angled intersecting lines which he contended signify stasis, death, or inanimate objects.

Now, S-curvature has mathematical meaning definable by a sigmoid function, of which there are several varieties depending on whether both asymptotes (tangents) are approached by the curve symmetrically, which they are in the case of the logistic and serpentine curves but not the Gompertz curve. On the view I am suggesting, beauty properties in some physical objects are those that describe perfect or ideal form defined mathematically by S-curvature, forming a realization base in the sense that, as with any mathematically describable curvature, what is exemplified in a physical object is an approximation. In a nutshell, beauty in a physical object means approximating S-curvature in any of (a)-(d) that Hogarth suggested.

On this view, there is an intuitive association of beauty in physical objects with the female form. The female figure exhibits S-curvature in all of (a)-(d) as observed from the vantage point of the sagittal and the coronal planes, as the reader can easily verify without my having to describe specifics. This may explain why the female figure has been a key subject in art for such a long time.

19. A Semantic Epistemology of Art?

A semantic epistemology of art would supply semantic concepts of belief, truth and evidence and show that they are applicable to aesthetic sentences. There are two options:

Option (A): Proceed along the lines of semantic epistemology for science or mathematics developed in Cusmariu 2012.

Option (B): Proceed along different lines.

Option (A): This option is available only for aesthetic sentences to which Hogarthian realization applies, as they are the only ones that (right now) could be translated into a scientific or mathematical language. This set of aesthetic sentences is comparatively small, so this option is not realistic.

Option (B): For the time being, I can only indicate some of the problems to be solved under this option.

Semantic Belief: Indexing an aesthetic belief to a language is easy enough:

(B1) Smith believes that the Mona Lisa is beautiful

becomes

(B2) Smith believes-in-English that the Mona Lisa is beautiful.

However, (B1) and (B2) are not equivalent as shown in Cusmariu 1982 and Cusmariu 1983, contrary to Carnap's analysis (1947, 62):

(C) There is a sentence Z in a semantical system S' such that (a) Z in S' is intensionally isomorphic to "The Mona Lisa is beautiful" in English, and (b) persons are disposed to an affirmative response to Z as a sentence of S'.

Now, (B2) could certainly be taken as primitive but that does not eliminate the need to explain its relationship to such key properties of (B1) as that speakers of different languages can believe the same thing or hold logically equivalent beliefs.

Semantic Evidence: Perhaps changing the evidence-bearers of a non-semantic theory from propositions or beliefs to sentences would be sufficient to yield a semantic theory of evidence for natural languages that would cover aesthetic sentences. It remains to be seen, however, which non-semantic theory of evidence – foundationalism, coherentism, reliabilism, etc. – could be made to work and how.

Semantic Truth: Tarski had sound technical reasons for restricting Convention T to formal languages (Tarski 1944; see also Kirkham 1992):

(a) There appears to be no systematic way of deciding whether sentences of a natural language are well-formed.

(b) Natural languages can describe semantic characteristics of their own sentences, such as truth, which we know leads to the Liar Paradox.

Thus, merely changing the truth-bearers of a non-semantic conception of truth, e.g., the correspondence theory, from propositions or beliefs to sentences would not be sufficient to yield a semantic conception of truth for natural languages that would cover aesthetic sentences. What would be sufficient is a very difficult question.²⁶

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