



Elgin on Science, Art and Understanding

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Abstract

Is art epistemically valuable? Catherine Z. Elgin answers this question in the affirmative. She argues for the epistemic value of art on the basis of her innovative epistemological theory, in which the focus is shifted from knowledge and truth to a non-factive account of understanding. After an exposition and critique of her view, as she develops it in her most recent book “*True Enough*” (MIT-Press, 2017), I will build on some of her ideas in order to strengthen her account.

1 Introduction

Art is important to us: We expend a lot of resources and time engaging with artworks; we want our children to be educated in art practices, art history, and so on; we want government institutions to support the arts; and we want works of art to be restored and protected. Why is this? Why is art so important to us? A widely discussed answer to this question is: Art is important to us because art—like science—is *epistemically* valuable in the sense that it is conducive to our epistemic aims. Let us call this thesis the “value-thesis”.

Catherine Z. Elgin’s defends an interesting version of the value-thesis. The version she defends is interesting, because she uses a notion of epistemic aims that is narrow in one sense and wide in another. It is narrow in the sense that she focuses on epistemic aims that our scientific endeavors are also directed at. This is what differentiates her account from views claiming that art is conducive to epistemic aims that lie outside the reach of science—such as positions that claim that the epistemic value of art is based in its potential to give us access to knowledge of moral values (s. Beardsmore, 1971; Nussbaum, 1990), to various forms of phenomenal

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experiences (s. Walsh, 1969), or other aims considered to be inaccessible within our scientific methods (s. Heidegger, 1936/1977, Adorno, 1970).

In contrast to those views, Elgin holds that art is conducive to exactly those epistemic aims at which science is also directed. In this sense she defends a version of the value-thesis that uses a narrow notion of epistemic aims. However, she also argues that the aims at which science is directed are broader and more diverse than is usually assumed. In her view those aims do not only comprise propositional knowledge, truth, and explanation, but also a certain form of non-factive understanding. It is in this respect that her defense of the value-thesis rests on a wide notion of epistemic (scientific) aims.

Thus Elgin claims that art is conducive to those epistemic aims at which science is also directed; and she also claims that via recourse to her epistemology—in which the focus is shifted from knowledge and truth to a non-factive account of understanding—this thesis can be specified and defended.

In this paper, I will discuss those claims as she develops them in her most recent book “True Enough” (Elgin, 2017). The discussion is organized around the following questions:

- (I) How plausible is Elgin’s claim that art has epistemic value, and how closely is this claim related to her epistemological theory of understanding?
- (II) Do her arguments in favor of the epistemic value of art reveal something *special* about art? Is there a special epistemic value of art, i.e., an epistemic value that artworks possess *in virtue of* being art,—for example, a certain aspect of understanding to which artworks are especially conducive or a special way in which they are conducive to the epistemic aim in question?
- (III) If Elgin’s arguments do not support the claim that there is a *special* epistemic value of art, is there a way to build on her ideas to establish such a value?

With respect to (I), I will argue that Elgin’s most plausible arguments in favor of the epistemic value of art are, on closer inspection, independent of her epistemological theory. She makes one argument that depends on the specifics of her theory of understanding. This argument, however, is unconvincing. Thus, Elgin’s strongest theses with respect to the epistemic value of art are independent of her epistemology (see Sect. 4). With respect to (II), I aim to show that Elgin’s arguments do not establish an epistemic value that is special to artworks, i.e., an epistemic value that artworks possess in virtue of being art (see Sect. 5). In section (III), I will build on some of her ideas in order to establish such a value (see Sect. 6).

Note that this is an important modification. After all, almost everybody would agree that we can learn something (improve our understanding) by engaging with art. But is there something we can learn from our engagement with art, that we could not learn otherwise? This is more controversial. For example, by looking at paintings by Pieter Breugel the Elder we might learn something about the people of the Renaissance—their way of life, their values, fears and hopes. But is there something we can learn from those paintings, which we could not learn by reading a diary of the time or a historical study? In other words: Is there something that we can

learn from those paintings *in virtue of* them being artworks? This is an important question. A defense of the epistemic value of art is more interesting, if it somehow reflects something special about art, i.e., something by which art is differentiated from non-art.¹

Furthermore, if there were something epistemically special about art, then the epistemic explanation of the significance of art mentioned at the beginning of this paper would be stronger. Many philosophers are interested in the epistemic-value thesis because, through recourse to it, we might be able to answer a central question in aesthetics: Why is art so important to us? Answer: It is so important to us, because it is epistemically valuable. This answer would be stronger, if art had a distinctive epistemic value: if there were an epistemic aim to which art is especially conducive or a special way in which it is conducive to epistemic aims. After all, if such a value could be established, art would be epistemically valuable in a way nothing else is.²

Before turning to the details of Elgin's position and the questions (I)–(III), I will first make some remarks regarding the relation between Elgin's position and the views of her teacher and collaborator Nelson Goodman in Sect. 2. Then, in Sect. 3, I will introduce Elgin's theory of understanding and her views on the epistemic value of art as she develops them in her recent book "*True Enough*". Sections 4–6 will then be concerned with questions (I)–(III), respectively.

2 Elgin and Goodman

Because Elgin worked for many years with Goodman, who also takes artworks to be epistemically valuable, some remarks regarding the relation between Elgin's position and the views of her teacher and collaborator are in order. Like Elgin, Goodman takes art to be conducive to exactly those epistemic aims at which science is directed. He argues for this thesis on the basis of his symbol-theoretic conception of art combined with his constructionalism, anti-foundationalism, pluralism, and irrealism. (I will specify these various -isms in due course.) In their co-written book "*Reconceptions in philosophy and other arts and sciences*" (1988) Elgin explicitly commits to these Goodmanian views and tries to specify and illuminate some of them. However, her more recent arguments in favor of her theory of understanding as well as the epistemic value of art can be read as being independent at least from Goodman's most controversial epistemological and metaphysical theses. This is why

¹ The claim that there is an epistemic value that artworks possess in virtue of being art does not imply anything about the relation of the epistemic value of an artwork to its aesthetic or artistic value. Thus, the question whether there is an epistemic value of artworks that they possess in virtue of being art, should be differentiated from the question whether the epistemic value of artworks somehow determines (at least in part) their aesthetic or artistic value. For a helpful discussion of the second question, see Gaut (2003, pp. 444–449).

² Recently, Elgin has also argued for a distinctive epistemic value of art (s. Elgin 2020). Her motivation to establish such a value as well as her argument in favor of it are very different from the position developed in this paper. I will come back to this in Sects. 5 and 6.

I take her more recent work (s. Elgin, 2002, 2011, 2017) on those issues to be especially interesting.

What does Goodman's constructionalism, anti-foundationalism, pluralism, and irrealism amount to? His *constructionalism* claims that we are constructing the world we seek to understand out of certain basic or primitive elements. The construction is supposed to clarify and illustrate how our knowledge of the world ultimately derives from those basic elements (s. Goodman, 1941/1990; 1951/1977).³ Goodman combines this constructionalism with the *anti-foundationalist* thesis that what counts as a primitive in our constructional endeavors is a matter of choice. In his view there are no privileged starting points such as phenomenal experiences or *erlebs* or whatever that irrevocably constitute the foundation of our constructions. Furthermore, he claims that whatever we choose as a foundation, we have to accept that the foundation itself is already symbolically and theoretically preformed.⁴ Thus, in a certain sense our constructions of the world (the world-versions) are constructions out of symbolic devices or labels (s. Goodman, 1978: Ch.1). This symbolically enriched anti-foundationalism consequently leads Goodman to a form of *pluralism*: He holds that choosing different symbolically and theoretically preformed primitives can lead to different constructions of the world (world-versions) which can all be equally theoretically satisfying. This pluralism is finally combined with the position that Goodman calls "irrealism", according to which there is no single, neutral reality that underlies our theoretically satisfying world-versions. In Goodman's view there is no single, neutral reality that would make our world-versions true, rather Goodman claims that there are as many worlds as there are consistent and theoretically satisfying world-versions (s. Goodman, 1978, 1984). This form of irrealism is hard to understand and probably the most problematic and controversial part of Goodman's philosophy.⁵

Goodman's symbol-theoretic conception of art (s. Goodman, 1968, pp. 252–255; 1978: Ch. 4) together with the combination of constructionalism, anti-foundationalism, pluralism, and irrealism opens up the following line of thought in favor of the epistemic value-thesis with respect to art: Artworks are symbolic devices that are involved in constructing consistent, and in other respects theoretically satisfying world-versions. Since each satisfying world-version is related to a world (irrealism), artworks are not only involved in constructing world-versions but also in constructing the world(s) we seek to get epistemic access to. Thus, art is epistemically

³ This form of constructionalism is comparable to the project Rudolf Carnap pursues in the "*Aufbau*" (s. Carnap 1928/1961). For a very useful comparison of these projects, see Cohnitz and Rossberg (2006: Ch. 5).

⁴ It is interesting to note that Goodman thinks that Carnap also accepted at least the first part of this anti-foundationalist thesis, see Goodman (1941: pp. 96–98).

⁵ Please note that Goodman himself seems to struggle with this part of his theory. Sometimes he takes the main point of his irrealism to consist in the suggestion that we should forget about *the* world, which might not even exist independent from the symbolically mediated world-versions, and rather restrict our focus on the various world-versions (s. Goodman 1978, p. 96). Nonetheless, he insists that "there are many worlds, if any" (s. Goodman 1984, p. 127).

valuable because artworks (just as other symbolic devices) are involved in constructing the world we seek to get epistemic access to.

In “*Reconceptions*” (1988) Elgin seems to commit to this general line of thought. The arguments in favor of the value-thesis in her more recent publications (s. Elgin, 2002, 2011, 2017), however, seem to be more independent of Goodman’s views. She still draws heavily and explicitly on Goodman’s symbol-theoretic insights, but her considerations do not explicitly rest on premises that are based on Goodman’s controversial combination of -isms described above. This allows for two possible readings of her more recent work: (a) Either the Goodmanian combination of ideas—and not only his theory of symbols—is always in the background and has to be presupposed in order to fully appreciate her arguments with respect to the epistemic value of art, or (b) her more recent arguments in favor of the epistemic value of art can be reconstructed without presupposing Goodman’s views over and above his symbol-theoretic insights—especially without presupposing irrealism.

In this paper, I am going to choose option (b). This has the advantage of not committing Elgin’s theory from the outset to controversial theses and of emphasizing the independence and novelty of her view. Furthermore, this approach allows for an interesting follow-up question: Can some of my critical remarks with respect to her position be countered by reference to option (a). Answering this question, which has to await for another occasion, would specify in detail in which way Elgin’s position with respect to the epistemic value of art depends on the wider Goodmanian program.⁶

3 Elgin on the Epistemic Value of Art

Elgin accepts that art does not contribute to the epistemic goals of propositional knowledge or true belief. To be sure, serious and detailed involvement with works of art might reliably lead to knowledge and true beliefs concerning the works themselves, e.g., their structure and form, who created them, when they were created. But do we thereby come to know anything about the world over and above the piece of art and the artist? With respect to matters over and above a particular work of art, it seems obvious that involvement with art is not a reliable belief-forming mechanism. For instance, involvement with art does not reliably produce true beliefs concerning the chemical structure of certain liquids, the cause of certain diseases, the orbits of certain planets, or other matters concerning the world in which we might be interested. Beliefs about the world that are formed on the basis of our engagement with art could easily be false.⁷

⁶ I will point out with respect to which critical remarks option (a) might be especially interesting (see fn. 13).

⁷ Note that I do not want to claim that involvement with art never results in a true belief with respect to matters over and above the work itself. All I want to claim is that involvement with art does not constitute a particularly reliable belief-forming process regarding beliefs of this sort.

Thus, if—as many epistemologists agree (e.g., Goldman, 1992; Sosa, 2007; Williamson, 2000)—a reliably formed belief or a belief that cannot easily be false is necessary for knowledge, art cannot contribute something significant to our aim of knowledge. The same seems to be true with respect to the epistemic aim of maximizing the set of true beliefs while at the same time avoiding false ones.⁸ But maybe there are other epistemic aims besides knowledge and true belief. Maybe art plays a significant role in achieving these other aims. In Elgin's view, there is such an aim, namely understanding. However, what exactly is understanding, and in what sense is art supposed to be conducive to it?

In the literature three general forms of understanding are differentiated: propositional, interrogative, and objectual understanding (s. Baumberger et al., 2017). Since Elgin defends the epistemic value of art only with respect to *objectual* understanding, for the purposes of this paper discussing the various forms of understanding and their relation to each other is not necessary.

Elgin introduces *objectual understanding* by the following schema:

X understands φ ,

where φ is a topic, discipline, or subject matter (Elgin, 2017, p. 43). She claims that this form of understanding constitutes our most important epistemic aim, and not—as proponents of veritism suggest—propositional knowledge or true belief.

However, what exactly does this kind of understanding amount to? In Elgin's view, objectual understanding is constituted by a coherent set of epistemic commitments. What is an epistemic commitment, and toward what kind of objects are commitments directed? Elgin construes the object of a commitment as a piece of information, broadly understood, so that “piece of information” refers to non-propositional as well as propositional items (see *ibid.* 89). An epistemic commitment is an attitude of acceptance with respect to those items, where this kind of attitude should not be equated with the attitude of belief, for two reasons. First, beliefs are propositional attitudes, and in Elgin's view not all epistemic commitments are directed towards propositions. Second, even if the object of a commitment is a proposition, Elgin allows that a person can be epistemically committed to a proposition p while at the same time believing that p is false without necessarily being irrational. This is due to her non-factivism, which I will turn to in due course.⁹

Elgin calls the set of commitments that constitutes objectual understanding an “account”. An account comprises a coherent set of initially tenable epistemic commitments, as well as additional commitments, which we have gathered in our cognitive endeavors. Some of them are first-order commitments about a certain topic at hand, others are second-order commitments about the methods for investigating it, the standards to which a cogent account of that topic should be held, and so on (*ibid.*: 12 and 65).

⁸ For an interesting discussion and critique of this epistemic truth-aim, see Berker (2013).

⁹ There are various difficulties with this characterization of epistemic commitments. One of those difficulties concerns the claim that commitments can be non-propositional. Since this claim plays an important role in her argument for the epistemic value of art, I will return to it in Sect. 4.

Furthermore, Elgin claims that the set of commitments constitutes understanding only if the commitments are in reflective equilibrium. In order to be in reflective equilibrium it is not enough that the commitments form a coherent set—such that the commitments are in general more reasonable in light of one another than they would be alone—, the set of commitments also has to be as reasonable as any alternative in light of the initially tenable commitments (ibid.: 64).¹⁰ With respect to this kind of understanding Elgin further holds that (a) understanding involves know-how, i.e., it involves knowing how to use the interconnected commitments in behavior that is directed at our cognitive (and sometimes practical) ends (ibid. 42 and 46–50); and (b) understanding is not factive, i.e., some of the commitments in the coherent set could be felicitous falsehoods that we accept (ibid.: 37–62). Thus factivism—the view that each element constitutive of understanding is true—is false (see also Elgin, 2007).

Claim (a) is supposed to solve a notorious problem in the theory of understanding. According to Elgin many epistemologists agree that in order to understand φ a person has to have access to pieces of information with respect to φ and *grasp* how those pieces of information are connected. The problem is to specify “grasping” in non-metaphorical terms (see Elgin, 2017: p. 46). Elgin suggests that an important element of *grasping* is a certain form of mental know-how, which in turn is construed as a normatively constrained disposition to “think, notice, infer, [...]”—“a disposition to reason well about a given topic in a range of relevant circumstances” (see ibid.: 47).

Claim (b) is probably one of the most controversial parts of Elgin’s theory. So-called “quasi-factivists” (e.g., Kvanvig, 2009; Mizhari, 2012) hold that radical departures from truth are incompatible with understanding. They claim that all of the propositions at the center of the coherent body of information that constitutes objectual understanding must be true. They allow that maybe a few peripheral propositions might be false, without destroying understanding, but at least all the central ones have to be true (s. Kvanvig, 2009). Elgin disagrees. She defends the so-called “non-factivist” view that even some of the propositions (commitments) at the center of the coherent set that constitutes understanding might be false (s. Elgin, 2007, 2017).

She does not claim that the coherent set of commitments could contain *only* falsehoods and still constitute understanding. But she claims: Regardless of whether a commitment should be considered being at the center or the periphery of the set of commitments that constitutes an account, understanding does not presuppose that it is true.

Elgin offers interesting and detailed arguments for each claim of her theory. Within the context of this paper, it is not necessary to discuss these arguments in detail.¹¹ The question I am interested in is the following: Assume we accept Elgin’s

¹⁰ For an interesting discussion, specification and modification of Elgin’s theory of reflective equilibrium, see Baumberger and Brun (2021).

¹¹ For interesting critical discussions of Elgin’s theory of (objectual) understanding, see e.g., Mizhari (2012), Frigg and Ngyuen (2021), Lawler (2021) and Nawar (2019).

epistemology, in what sense is art supposed to be conducive to the epistemic aim of objectual understanding? Elgin holds that “epistemic advancement [...] consists in improving on the commitments we currently hold, where improvement itself must be measured by current standards” (ibid.: 67). How can art improve on the set of commitments that constitutes understanding? The answer Elgin gives in “*True Enough*” (2017) can be usefully divided into three steps.¹²

First, she holds that *exemplification* plays an important role in the advancement of understanding. When an item exemplifies something, it functions as a symbol that refers to one or more of the properties that the item itself instantiates. Thereby the item can help us appreciate a certain feature of the world that we have overlooked before. This appreciation “can be woven into our developing understanding, stabilizing or enhancing its equilibrium. Alternatively, an exemplar may threaten equilibrium, making manifest that things are more problematic than we previously thought” (ibid.: 190).

Second, Elgin argues that just as scientific models, samples, and thought-experiments exemplify, artworks do as well. They (literally and metaphorically) exemplify interesting features of the world that we might have overlooked if we had not been engaged with the works of art—maybe because some of those features are semantically unmarked. Some works of art do not only exemplify those features, they also underscore their significance. In appreciating these features, we can advance our understanding with respect to a certain topic in the way explained in the first step. In this sense, art can propose hypotheses (commitments) that are worth testing—in other words, worth being interwoven in our set of commitments that is supposed to be coherent and in reflective equilibrium (ibid.: 205–220).

Third, Elgin claims that the epistemic significance of art is not restricted to proposing hypotheses worth testing. In her view, artworks *themselves* (i.e., artworks as potentially non-propositional items) can be woven into the account that constitutes our understanding—thereby either stabilizing or threatening the equilibrium of our set of commitments that is supposed to constitute understanding (ibid.: 206–207, 220).

Thus, with respect to Elgin’s view concerning the epistemic value of art, we can differentiate three claims:

- (A) Exemplification plays an important role in the advancement of understanding. By way of exemplification, an item, such as a scientific model or a sample of something, can help us appreciate an interesting feature of the world. Processing this information (i.e., weaving this information into a coherent set of epistemic commitments) is conducive to our epistemic aim of understanding.
- (B) Artworks exemplify. Thus artworks can help us appreciate interesting features of the world as well. Again, processing this information (i.e., weaving this information into the coherent set of epistemic commitments) is conducive to our epistemic aim of understanding.

¹² She gives a slightly different answer to that question in her paper “*Art in the Advancement of Understanding*” (2002). I will come back to this point in Sect. 5.

- (C) However, artworks are not mere tools to gather new information, artworks themselves (i.e., artworks as potentially non-propositional items) can be woven into the account that constitutes understanding.

Please note that claim (C) does not follow from (A) and (B). Even if we accept (A) that exemplification plays an important role in the advancement of understanding, and also accept (B) that artworks exemplify, we could still rationally deny (C). We could hold that artworks are of epistemic value, but *only as mere tools*, namely as symbolic devices by the help of which we gather new information, which is then supposed to be woven into our set of commitments that constitutes understanding.

4 Question (I)

We are now in a position to tackle question (I): How plausible is Elgin's claim that art is of epistemic value, and how closely is this claim related to her theory of understanding? In light of the differentiations put forward in Sect. 2, this question amounts to the following: How plausible are claims (A)–(C), and how closely are they connected to her epistemological views on understanding?

Claims (A)–(B) are plausible. Elgin convincingly supports claim (A) by highlighting the role that exemplification plays in scientific practices that are unquestionably conducive to understanding, such as scientific modeling, engaging in thought-experiments, or collecting samples (Elgin, 2017: Ch. 1–2, 4, 9, 11–12). Furthermore, she defends (B) with insightful and detailed discussions of various artworks that convincingly show that artworks are also capable of exemplifying interesting properties (ibid.: Ch. 10 and 12).

However, claims (A)–(B) are not closely connected to her epistemological views on understanding. Even without subscribing to her epistemological theory, we can accept that exemplification is of epistemic worth and that art can—through exemplification—make us appreciate certain relevant and interesting features about a certain topic at hand. We can also accept that this appreciation sometimes leads to hypotheses that are worth testing. In this sense, art is of epistemic value. Art is capable of directing our attention toward interesting hypotheses.

At least this basic line of thought captured in (A)–(B) can be accepted by almost all epistemologists—irrespective of their views on what our central epistemic aims are, how understanding should be specified, what testing a hypothesis amounts to, and so on. For example, even a veritist who holds that our central epistemic aim does not consist in understanding but in maximizing the set of *interesting* true beliefs can still accept that artworks may help us realize which hypotheses are interesting and therefore worth testing. In this way, these hypotheses have a chance to amount to an *interesting* true belief. The same is true for (quasi-)factivists who agree with Elgin that our most central epistemic aim is understanding but argue for a more conservative, (quasi-)factivist account of understanding. A (quasi-)factivist can accept that artworks help us appreciate interesting features of the world and that this new information should be woven into the set of epistemic commitments that constitutes understanding. Thus even veritists and (quasi-)factivists can (and probably

should) accept that artworks are epistemically valuable in the sense that they help us appreciate interesting features of the world we might have overlooked if we had not engaged with the works of art.

Claim (C) is different in this respect. (C) is more closely connected to a controversial part of her theory of understanding. Elgin claims that artworks are not only epistemically valuable as symbolic tools but that artworks themselves are constitutive of understanding (ibid.: 206–207, 220). This means that artworks themselves are supposed to be interwoven into the account that comprises understanding. Because many artworks have a non-propositional structure, it follows that even non-propositional items are elements making up the coherent set of commitments. Thus (C) implies that non-propositional items are constitutive of the account that constitutes understanding. Additionally, because non-propositional items are not truth-apt, (C) also implies that understanding is not factive (i.e., not every element in the set of commitments constituting understanding is true). Therefore claim (C) depends on an important and very controversial thesis of Elgin's epistemology, namely the thesis that understanding is non-factive.

Is claim (C) plausible? What does it mean that non-propositional items can be elements of the set of commitments (the account) that constitutes understanding? Elgin argues for the view that non-propositional items themselves can be woven into the account that constitutes understanding by pointing to examples.

First, assume Mike asserts, "All swans are white." To refute him (i.e., to bring him to adjust his set of epistemic commitments), it is enough to show him a black swan. It is the swan (a non-propositional item) that contributes to his understanding of ornithology by forcing him to make the appropriate adjustments to the set of commitments (see ibid.: 206).

Second, perspectives are non-propositional as well. By adopting a different perspective, we can appreciate the relationships between certain commitments that we have not seen before. For example, shifting from a third- to a first-person perspective helps us realize that "the assertion that *p*" and "the belief that *p*" are closely connected. This is illustrated by the difference between "It is raining, and Kate does not believe that it is raining" and "It is raining, and I do not believe that it is raining." Only the second sentence is an instance of Moore's paradox (ibid.: 206).

Third, John Snow's plot—which is supposed to be a non-propositional item—made manifest that virtually all cholera victims in 1854 in London got their drinking water from a single source. This led to major adjustments within the respective set of epistemic commitments (ibid.: 206).

Elgin immediately recognizes that one might object to these examples by claiming that they can all be captured in propositions, so that these examples cannot show that non-propositional items themselves are constitutive of understanding. In this sense, one might claim that the swan, the perspective, and the plot in the examples are not themselves epistemically effective but rather the following propositions are:

- (1) Here is a case that shows that Mike's hypothesis is false: [insert black swan].
- (2) Looked at from this point of view, the following is unassertible: [insert an instance of Moore's paradox].
- (3) This plot shows the data cluster around a single point [insert map].

However, she argues that these propositions are incapable of paraphrasing away the non-propositional items in question. After all, those non-propositional items are inserted in propositions (1)–(3). They are inserted because they themselves do the cognitive work in question (ibid.: 207).

I am not convinced by her response to the objection. First, I cannot see why in (2) a non-propositional item is inserted. An instance of Moore's paradox has propositional content. Second, there are other propositions available that have a better chance of paraphrasing away the non-propositional items:

- (4) This is a black swan.
- (5) Looked at from this point of view, the following is not felicitously assertible: It is raining, and I don't believe that it is raining.
- (6) This plot shows that cholera victims got their drinking water from a single source.

No non-propositional items are inserted in (4)–(6). Why not claim that the epistemic work done by the above-mentioned examples is actually done by (4)–(6)? (Note that (2) and (5) are identical. The reason for this is that, as I already said, I cannot see why in (2) a non-propositional item is inserted.) Thus Elgin's argument for (C), her argument for the view that even non-propositional items can be of direct epistemic value in the sense that they are woven into a coherent set of commitments that constitutes understanding, is unconvincing.¹³

In addition, Elgin's claim that both propositional and non-propositional items can be elements of an account is not only poorly supported, it is also fraught with a serious problem. As I explained earlier, Elgin argues that an account amounts to understanding only if the set of commitments constituting an account is in reflective equilibrium. Furthermore, she agrees that coherence is an important element of reflective equilibrium: For a set of commitments to be in reflective equilibrium it is necessary—but not sufficient—that the set of commitments is coherent (see ibid. 63–66). A widely accepted and plausible way to spell out what coherence amounts to is the following: If certain elements are in coherence, then they stand in various inferential relations, where it is widely accepted that inferential relations (deductive, inductive, and abductive) can only hold between propositions or attitudes with propositional content (cf. Williamson, 2000, pp. 194–196). Thus, in claiming that some of the commitments that constitute understanding are non-propositional, Elgin faces the problem of losing this plausible way of spelling out what coherence amounts to. This is a problematic consequence of her view.

Thus with respect to question (I), we can conclude: Elgin's claims (A)–(B) are plausible, but they are not closely connected to her theory of understanding. Only claim (C) depends on an interesting and controversial thesis of her epistemological

¹³ Perhaps this criticism with respect to claim (C) could be addressed by reference to option (a) mentioned in Sect. 2. It should be noted, however, that nowhere in "*True Enough*" (2017) is Elgin referring to the wider Goodmanian program in order to argue for the claim that artworks themselves can be woven into the set of commitments constituting understanding (see claim (C)).

theory, namely the idea that understanding is non-factive. Thesis (C) implies that non-propositional items can be elements of a coherent set of epistemic commitments that comprise understanding, as she construes it. However, her argument that non-propositional items themselves can play that role is problematic. Furthermore, if we accept that non-propositional items can be part of a coherent set of commitments, then it is hard to explain what it actually means to say that the set of commitments constituting understanding is *coherent*.

5 Question (II)

Let me now turn to question (II): Do Elgin's arguments in favor of the epistemic value of art reveal something special about art? Is there a *special* epistemic value of art, i.e., an epistemic value that artworks possess in virtue of being art?

Her arguments in favor of the epistemic value of art rest on the insight that artworks belong to a symbolic system in which exemplification plays a crucial role. In Elgin's view the epistemic value of art depends on the exemplifying capacities of artworks. However, not only do artworks exemplify in her account. In her view scientific models, thought-experiments, and samples do so as well. She gives detailed arguments for the view that the epistemic value of scientific models, thought-experiments, and samples are based on their exemplifying capacities. So in her view artworks are epistemically valuable for the same reason that scientific models (or samples) are—in both cases the epistemic value is based on the exemplifying capacities of the items in question. In this sense, there is no epistemic value of artworks that is special to artworks.

There is another way to prove this point. Elgin argues in detail that some dance pieces exemplify interesting features of the human body (Elgin, 2017, pp. 205–220), whereby these pieces give us epistemic access to a feature that in turn might advance our understanding of the human organism. Note that the same could be said with respect to sports. The movements of athletes can exemplify interesting features of the human organism as well. To employ a somewhat drastic example, consider the spastic movements of a marathon runner who is close to collapse due to exhaustion and low blood sugar; in certain contexts, these movements are capable of exemplifying the vulnerability and fragility of the human organism, as well as its dependence on a continual supply of certain nutrients. Thus, Elgin's arguments for the epistemic value of art could just as well be turned into arguments for the epistemic value of sports. Therefore, her arguments do not establish that artworks have a special epistemic value, i.e., a value that artworks have in virtue of being art.

Elgin would probably agree. Her arguments in "True Enough" (2017) are not supposed to establish a special epistemic value of art. Art is epistemically special if one of the following is true: (a) there is an epistemic goal (e.g., a certain aspect of understanding) to which our engagement with art is particularly conducive, or (b) our engagement with art is conducive to an epistemic aim in an especially advantageous way. In her most recent work, Elgin accepts that establishing such a special epistemic value of art is important, because otherwise the philosophical subdiscipline of

aesthetics might be supplanted or swallowed up by epistemology (s. Elgin 2020, pp. 139–140). In my view the concession that neither (a) nor (b) holds would be unfortunate in other respects.

First, the thesis that art is epistemically valuable is more interesting and controversial if it is combined with the view that there is something epistemically special about art. After all, almost everybody would agree that people can learn something from engagement with art. The view that there is something that can only be learned through art, or at least be learned particularly well through art, is more interesting and controversial. It is thus worth considering whether Elgin's position in "True Enough" (2017) could be strengthened in this respect.¹⁴

Second, if there is nothing epistemically special about art, then the epistemic explanation of the significance of art is weakened. One interesting aspect of the view that art is epistemically valuable is that, through recourse to it, we might be able to answer a central question in aesthetics: Why is art so important to us? Meanwhile, if there is nothing epistemically special about art (i.e., if neither (a) nor (b) holds), then the epistemic value of art rests on features that art shares with other devices and practices. I am not claiming that the explanation would be worthless in this case, but rather that by establishing a distinctive epistemic value of art, an even stronger epistemic explanation of the importance of art could be given: Art is important to us because it is epistemically valuable in a way nothing else is. This is a familiar line of thought in the tradition that claims that art is epistemically conducive to epistemic aims that cannot be reached by science (see, for example, Heidegger, 1936/1977, Adorno, 1970). I am interested in whether Elgin's position, which—in contrast to this tradition—holds that art is conducive to those aims toward which science is also directed, can also claim that there is a distinctive epistemic value of art—an epistemic value that artworks possess in virtue of being art. This leads to question (III).

6 Question (III)

In light of the discussion so far, we can reformulate question (III) as follows: Is there a way to build on Elgin's ideas to defend the stronger and arguably more interesting claim that there exists an epistemic value that is in a certain sense special to art?

In new work Elgin herself answers this question affirmatively (s. Elgin 2020). She argues for a distinctive epistemic value of art based on the assumption that artworks are subject to interpretative indeterminacy, i.e., that they are open "to alternative, mutually incompatible, but individually acceptable interpretations" (ibid.: 140). Space does not allow to discuss the controversial assumption of interpretative indeterminacy as well as the epistemic value that Elgin associates with it in detail. Thus, in what follows, I will give a different positive answer to (III)—an answer that is independent of the assumption of interpretative indeterminacy. However, it

¹⁴ Note, however, that even if Elgin's theory could not be strengthened in the ways suggested, this would not render her theory worthless. Even though almost everyone agrees that one can learn something through art, her theory explains why and in what way this is the case.

is important to note at the outset, that I won't be able to establish an epistemic value that is *exclusive* to art, i.e., an epistemic value that all and only artworks possess. Doing so would presuppose finding individually necessary and jointly sufficient conditions for being an artwork and then identifying an epistemic value dependent on those conditions. However, finding and defending such conditions is a task that cannot be done within the limits of this paper—if it can be done at all.

Thus, I will content myself with the following strategy: Via recourse to Nelson Goodman's theory of symbols—which Elgin explicitly accepts—so-called symptoms of the aesthetic can be specified. These symptoms are: *exemplification*, *syntactic and semantic density*, *repleteness*, and *complex chains of reference* (s. Goodman, 1978: ch. 4). The first of those symptoms, namely exemplification, is, according to Elgin, just as widespread and important in the arts as it is in science. However, what is special about exemplification in the arts is that it occurs within symbolic systems that typically exhibit the other abovementioned symptoms. Thus, via recourse to those other symptoms, exemplification in the arts can be differentiated from exemplification in the sciences. Hence, even though Goodman's symptoms of the aesthetic might not amount to a full-blown definition of art, they nevertheless draw attention to features that are of high importance in differentiating artworks from other symbolic devices. Thus, if we could find an epistemic value of art that is based on a combination of those symptoms, we would thereby establish an epistemic value that artworks possess in *virtue of* being art. Even though we would not have defended the stronger claim that there is an epistemic value exclusive to artworks, i.e., a value that all and only artworks possess.

In following this strategy, I will first elaborate on the aforementioned symptoms of the aesthetic and specify how, on the basis of those symptoms, Elgin herself differentiates exemplification in the arts from exemplification in the sciences (Sect. 6.1). Second, I will introduce a certain conception of multiperspectival and objective understanding that is not in conflict with Elgin's epistemological theory (Sect. 6.2). Third, I will explain in what sense the special way in which artworks exemplify is conducive to this kind of understanding (Sect. 6.3).

6.1 Exemplification in the Arts and Sciences

For Elgin, the epistemic value of art depends on the exemplifying function of art. However, Elgin convincingly argues that exemplification is equally important and widespread in the sciences. At the same time, Elgin upholds a significant difference between exemplification in the arts and in science (Elgin, 2011, pp. 409–411). I agree with her that this difference can be specified through recourse to Goodman's symptoms of the aesthetic. Especially the features of syntactic/semantic density, repleteness, and the fact that artworks refer by way of complex chains of reference are relevant in this respect.

What does it mean for a symbolic system to be syntactically and semantically dense? Simply put, a system is *syntactically dense* if the finest (unrecognizable) difference in certain respects constitutes a syntactic difference, and it is *semantically dense* if the finest (unrecognizable) difference in certain respects constitutes a

semantic difference (i.e., a difference in reference).¹⁵ In Goodman's view, the symbolic system of art is (often) semantically and syntactically dense (Goodman, 1968, pp. 226–227). Thus exemplification in the arts (typically) takes place in dense systems, whereas exemplification in the sciences does not. In the sciences, exemplification takes place in finitely differentiated systems.

Science sets a limit on the differences it will deem significant. The air sample drawn from the mine does not exemplify the precise proportions of its component gases; it exemplifies those proportions only to a fixed number of significant figures. It is perhaps 0.002% carbon monoxide. Even if precisely 0.002154% of the molecules in the sample were carbon monoxide molecules, beyond a thousandth of a percent, further precision is dismissed as insignificant (Elgin, 2011, p. 410).

Another important difference between symbolization in the arts and sciences can be specified by recourse to *repleteness*. In contrast to models, samples, and thought-experiments, artworks are *relatively replete*. That is, in the interpretation of an artwork, typically many more features are relevant than for symbolic devices in the sciences. Goodman illustrates this difference with the curve of an electrocardiogram that is indistinguishable from a drawing by Hokusai.

The only relevant features of the diagram are the ordinate and the abscissa of each of the points the center of the line passes through. The thickness of the line, its color and intensity, the absolute size of the diagram, etc., do not matter; [...]. For the [Hokusai] sketch, this is not true. Any thickening or thinning of the line, its color, its contrast with the background, its size, even the quality of the paper—none of these is ruled out, none can be ignored (Goodman, 1968, pp. 226–227).

Finally, in contrast to symbolic devices in the sciences, artworks often refer by way of long and very complex chains of various reference-relations. A symbol can (conventionally) denote anything whatsoever, but it can only exemplify properties that it instantiates. A chain of reference where both reference-relations work together can be illustrated by considering the case in which a picture of a bald eagle refers to the United States of America. The picture denotes a certain class of birds, and these birds exemplify independence and freedom, whereas the terms “independence and freedom” in turn are supposed to denote the United States (Goodman, 1984, p. 64). Artworks often refer through chains of reference that are even longer and much more complex than this relatively simple example. This is not true with respect to symbolic devices in the sciences.

From an aesthetic perspective, the density and repleteness of works of art, as well as the fact that they refer through long and complicated chains of reference, are interesting. All those features explain the fact that works of art provide a wide and almost never-ending variety of discoveries, continually resulting in new interpretations of the work. Thus density, repleteness, and complex chains of reference allow

¹⁵ For the precise characterization of finite syntactic and semantic differentiation and density, see Goodman (1968, pp. 131–154). And for a good discussion and explanation of density and the relevant syntactic and semantic differences, see Cohnitz and Rossberg (2006, pp. 151–158).

us to account for what Kendall Walton has referred to as an “open-endedness” in the investigation and interpretation of artworks (s. Walton, 1990, p. 229).

Elgin explicitly agrees with Goodman that density, repleteness, and complex chains of reference are symptoms of the aesthetic, and she accepts that, by pointing to these characteristics, the symbolic system of art can be differentiated from other symbolic systems, such as the symbolic systems used in the science. Thus, to establish an epistemic value of art that is special to artworks, we must find an epistemic value that stems from the fact that artworks are semantically/syntactically dense, replete, and refer by way of long and complicated chains of reference.

6.2 Systematicity, Multiple Perspectives and Objective Forms of Understanding

To establish an epistemic value connected to the density, repleteness, and complexity of artworks, I suggest modifying and expanding Elgin’s theory of understanding in two ways.

First, I agree with Elgin that strong knowledge-based accounts of understanding are false. Knowledge is (at least) not *sufficient* for understanding. This is especially true for objectual understanding. An epistemic subject *S* might well know all individual propositions/items of information concerned with the subject matter ϕ , but it seems reasonable to suppose that as long as all these individual items of information are not pieced together in the right way by *S*, *S* does not understand the subject matter (Elgin, 2017, pp. 33–62; see also Kvanvig, 2003, pp. 185–203; Pritchard, 2011, pp. 66–86). What understanding a complex phenomenon or a subject matter requires is awareness of explanatory or other coherence-inducing relationships concerning individual pieces of information.

However, presumably, not only is the systematization of *beliefs/acceptances* relevant but also the systematization of *concepts*. For instance, it is plausible to suppose that if a person understands a certain process—say, the process of photosynthesis—the person has identified and classified the entities involved in that process through the use of concepts, subconcepts, sub-subconcepts, and so on. Furthermore, it is also plausible that the person has classified the process itself in subprocesses, sub-subprocesses, sub-sub-subprocesses, and so on. These systematic classifications eventually enable the person to discover and identify the process, even if it is realized differently—as for example, when photosynthesis is performed differently by different species of plants. And as far as it is a necessary condition for understanding a process to identify the process over a wide range of instances, this form of classifying the inventory of the world by systematizing *concepts* that refer to reality seems to be a precondition for objectual understanding as well.¹⁶

¹⁶ I do not want to claim that Elgin is unable to accommodate the epistemic importance of refining and systematizing concepts. In older work, Elgin is very aware of the epistemic importance of those refinements (see Goodman & Elgin 1988; Elgin 2002), and it may well be possible to incorporate this feature into the current version of her theory of understanding as well. In her recent book, however, conceptual refinement and re-systematization do not play a major role (see Elgin 2017).

We can summarize this idea as follows: An essential feature of understanding is organizing and systematizing our mental representations in a certain way. With respect to beliefs/acceptances, the systematic organization partly consists of grasping inferential, explanatory, and other coherence-relevant interrelations between them. With respect to concepts, systematic organization consists of a hierarchical organization of our concepts in generic terms, subconcepts, sub-subconcepts, and so on.

Second, we can introduce multiple perspectives and a certain notion of objective understanding, which will also prove helpful. Let us say that a perspective is constituted by our conception of the world—that is, in the way we represent the world and how we systematically organize those representations. We can have different perspectives P1 and P2, and each perspective has its own boundaries, restrictions, and limitations. Each perspective gives systematic access to certain phenomena at the cost of occluding others. Suppose we somehow manage to correlate and combine P1 and P2. This correlation leads to a new perspective P3, which will have its own limitations and boundaries. However, let us further suppose that P3 can keep all the epistemic benefits of P1 and P2—it gives access to all the phenomena P1 and P2 gave access to, and it can be grasped by epistemic subjects just as easily as P1 and P2. In this case, the resulting perspective P3 will be epistemically valuable in the following sense: By being less restricted than P1 and P2, P3 leads to a multiperspectival and more objective form of understanding. This process could be repeated. We could combine P3 with further perspectives, yielding still more objective forms of understanding. The resulting forms of understanding might become increasingly less restricted and thus more and more objective, but they would still be bound to a perspective; a perspective-free representation of the world—i.e., a “view from nowhere”—is probably impossible. The term “view from nowhere” was coined by Nagel (1986), and some of his remarks on objectivity are closely related to the notion of objective understanding that I want to employ (see *ibid.*: 4).

The idea that correlating various perspectives (i.e., various systems and modes of representations) leads to multiperspectival and more objective forms of understanding is reflected by the fact that we sometimes experience a more robust and deeper understanding of a certain complex phenomenon *X* as soon as *X* is represented in different modes of representation. For instance, it is often helpful when a text about *X* is accompanied by a diagram, and it is often more helpful if different sorts of diagrams are used simultaneously (e.g., tree diagram, three-dimensional diagram, or pie chart). A reason for this might be that the view just sketched is correct: By using and correlating different modes of representation, we can achieve a more objective perspective of reality and thereby a more objective and robust understanding of it.

Furthermore, even if P3 would not be able to keep all the epistemic benefits of P1 and P2 in such a way that P3 would be more objective and less restricted, attempts to correlate various perspectives might still be of epistemic value. By focusing on different perspectives in different representational systems and by aiming at correlating them, the restrictions and limitations of the individual perspectives and the general perspectivity of our understanding are highlighted. Thus, even if P3 fails to provide a less restricted perspective, engaging in attempts of combining and correlating P1 and P2 can be of epistemic value: It highlights the restrictions and limitations of our

current understanding and thereby has the potential to point to new directions of research. Additionally, it highlights the perspectivity of our understanding in general, (i.e., the fact that there are alternative ways to represent a phenomenon). Bas C. van Fraassen refers to this general feature of perspectivity as the “horizon of alternatives.” If we are aware of the fact that a representation or a representational system is representing objects from a certain perspective, “we are attending to its alternatives: thinking of it in a ‘horizon’ of other perspectives on the same objects” (van Fraassen 2008: 39).¹⁷ Thus, the following claim seems plausible: Combining and correlating different perspectives (i.e., different systems and modes of representation) fosters an important insight into our own epistemic situation, namely, its perspectivity, and can in the best case also lead to multiperspectival and more objective forms of understanding.¹⁸

6.3 An Epistemic Value in Virtue of Being Art

We now have the resources to specify an epistemic value that is special to artworks. An important and essential feature of understanding is systematically organizing our representations that refer to reality. Because concepts and beliefs are representations that can be expressed in the language system of representation, systematically organizing concepts and beliefs amounts to a systematic organization within the language system of representation. To achieve more *objective* forms of understanding, various systems of representation have to be taken into account and systematically connected. Because perspectives of the world are partially constituted by our systems of representing the world, by correlating and interrelating different systems of representation we can achieve a view of the world that is able to incorporate different perspectives, thus, in the best case, resulting in more objective, multiperspectival forms of understanding.

If we accept this general characterization, we can combine it with the following claims based on Goodman’s symbol-theoretic views with respect to art:

- (a) Works of art are symbols embedded in a specific symbolic system.
- (b) The symbolic system of artworks is (often) syntactically and semantically dense.
- (c) The symbolic system of artworks is (often) relatively replete.
- (d) Works of art (often) refer indirectly through complex chains of reference.

Each of the claims (a)–(d) speaks of an interesting feature of art. Additionally, claims (b)–(d) highlight features by which the symbolic system of artworks can be differentiated from other symbolic systems.

¹⁷ Even though van Fraassen mainly discusses visual perspectivity, this insight can be transferred to perspectivity in general.

¹⁸ Elgin develops a different account of objectivity, which she calls “procedural objectivity”. This form of objectivity is achieved by developing understanding in an impersonal and impartial manner (Elgin 2017, pp. 159–169).

If claim (a) is true, then works of art function as devices of classification. As such, a piece of art, is particularly effective and interesting if it somehow provides a “fresh look” on the object it refers to (e.g., if it depicts a common object in a new and insightful manner). Works of art are comparable in this respect with metaphors. Successful metaphors help us discover new relations between objects or realms of objects, thereby opening up new ways to classify reality, which might be helpful and could eventually lead to new insights. The same is true for artworks: “The marking off of new elements or classes, or of familiar ones by labels of new kinds or by new combinations of old labels, may provide new insight” (Goodman, 1968, p. 33). This is a feature that Elgin highlights as well, especially in her paper “*Art in the Advancement of Understanding*” (2002). However, this epistemic value of art is not specific to art, it is not a value that artworks possess in virtue of being art. Elgin explicitly claims that reconfigurations and reorganizations of this kind are regularly achieved by other means as well.

Focusing on (b)–(d) helps with identifying an epistemic value that is special to artworks. If claims (b) and (c) are correct, then, in contrast to many other symbolic systems, the symbolic system of art is syntactically/semantically dense and relatively replete. We have already noted that density and repleteness together account for potential open-endedness with respect to the investigation and interpretation of artworks. Because an attempt to interpret an artwork can be construed as an attempt to verbalize its meaning (e.g., an attempt to correlate a symbol of one system of representation to symbols of another system of representation), entering such a potentially open-ended interpretative process will train abilities, which are indispensable for multiperspectival and more objective forms of understanding. After all, an essential feature of objective understanding as we have characterized it consists precisely in combining and relating different systems of representations.

Furthermore, if claim (d) is right, then better understanding what an artwork refers to demands following a long and complex chain of reference. Thus understanding what a work of art possibly refers to presupposes correlating constituents of different systems of representation. Given our characterization of objective understanding, we can again conclude that involvement with works of art will train abilities, which are indispensable for gaining more objective forms of understanding.

Thus, if the given characterization of more objective, multiperspectival forms of understanding and the introduced symbol-theoretic views with respect to art are correct, then there is an epistemic value that is special to artworks: Involvement with art is conducive to multiperspectival, more objective understanding. To be sure, involvement with art does not guarantee that we achieve more objective forms of understanding. However, if claims (b)–(d) are correct, then serious involvement with works of art will train exactly those cognitive abilities we need in order to achieve this form of understanding. Because claims (b)–(d) specify important features of artworks, the specified epistemic value seems to be an epistemic value that artworks possess *in virtue* of being an artwork.

7 Concluding Remarks

In Sects. 4–5, I argued that Elgin’s most plausible claims concerning the epistemic value of art are independent of her epistemological theory. Thus, in my view, many epistemologists could and should agree with her about those claims (see claims (A)–(B) in Sect. 3). Other claims concerning the epistemic value of art, however, namely the ones more closely connected to controversial parts of her theory of understanding, are problematic (see claim (C) in Sect. 3). Additionally, I argued that Elgin’s arguments in “True Enough” (2017) do not establish a special epistemic value of art, i.e., an epistemic value that artworks possess in virtue of being art.

In Sect. 6, I developed a line of thought that is capable of establishing such an epistemic value. The main idea can be summarized as follows: In contrast to other symbolic devices, artworks belong to a system that is syntactically/semantically dense and replete. Furthermore, artworks often refer by way of long and complicated chains of reference in which various reference-relations are combined. These features explain the fact that works of art provide a wide and almost never-ending variety of discoveries, continually resulting in new interpretations of the work. An attempt to interpret an artwork can be construed as an attempt to correlate a symbol of one system of representation to symbols of another system of representation. Entering such a potentially open-ended interpretative process will train abilities that are indispensable for multiperspectival and more objective forms of understanding. After all, an essential feature of this form of understanding involves precisely combining and relating different systems of representations.

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