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Two Problems in Scientific Cognitivism

Abstract

I try to interpret the notion of “scientific cognitivism” that can be found in Allen Carlson’s works. I argue first that, contrary to Carlson’s view, scientific knowledge does not play a necessary role in the aesthetic appreciation of nature but may even be detrimental to it. Mark Twain’s aesthetic experience from the perspective of a practical level is exemplary. I argue scientific cognitivism has no plausibility in the appreciation of nature. I then analyze an inappropriate sense of scientific cognitivism in the aesthetic appreciation of nature on a theoretical level, including Kant’s theory and other environmental philosophers such as Hepburn, Zangwill, and Berleant. In conclusion, I claim that scientific cognitivism enables inappropriate aesthetic appreciations of nature.

Keywords

Scientific Cognitivism, Kantian Aesthetics, Aesthetic Appreciation of Nature, Environmental Aesthetics, Adherent Beauty

In 1966, Ronald Hepburn published a paper entitled “Contemporary Aesthetics and the Neglect of Natural Beauty.” Three years later, Theodor W. Adorno published his book *Aesthetic Theory*, which included a chapter entitled “Natural Beauty.” These two pieces of work symbolize the rebirth of natural beauty in aesthetics (Tafalla 2001, 45). After that, environmental aesthetics has experienced great development along with the continual movements of environmental protection. Environmental philosophers like Allen Carlson, Noël Carroll, and Emily Brady, to mention but a few, have attempted to build a new aesthetical construction regarding nature itself,

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in which the aesthetic model of the appreciation of nature is among the most frequently discussed topics. The claims are divided into cognitivism and non-cognitivism. The most widely influential claim is Allen Carlson's scientific cognitivism.

Scientific Cognitivism

In the late 1970s, Allen Carlson presented his notion of "scientific cognitivism" or "the environmental model" (also later referred to as "the natural environmental model"). What is Carlson's environmental model? He writes that, "The model I am thus presenting for the aesthetic appreciation of nature might be termed the environmental model. It involves recognizing that nature is an environment and thus a setting within which we exist and which we normally experience with our complete range of senses as our unobtrusive background" (1979, 274). It is not difficult to notice that the environmental model is partly reasonable in that it conceives "nature" as "an environment," which provides a framework to the subject-object pattern derived from the aesthetic appreciation of art. "When we conceptualize the natural environment as 'nature,' I think we are tempted to think of it as an object" (1979, 271). It provides a good reference concerning the aesthetic appreciation of nature.

In this text, however, I mainly argue that Carlson's scientific cognitivism does not apply to the aesthetic appreciation of nature. Carlson attempts to answer the questions of what and how we should aesthetically appreciate nature. He argues two traditional approaches, namely the object model and the scenery/landscape model, and he maintains that both consist in assimilation of the appreciation of nature to the appreciation of certain art forms. He concludes that his environmental model can provide a better answer to those questions mentioned above because his approach does not assimilate natural objects to art objects, but rather closely follows the general structure of the aesthetic appreciation of art. As he says, "the aesthetic appreciation of nature requires knowledge of natural history and science just like how the appropriate aesthetic appreciation of art requires knowledge of art history and art criticism" (1981, 25). Carlson holds that scientific knowledge plays a necessary and significant role in the aesthetic appreciation of nature. He gives a critique of the assimilation of the appreciation of nature to the appreciation of art; nevertheless, his claim is still deduced from the analogy of nature to art, regardless of the general structure. What's more, Carlson believes that scientific knowledge about nature—particularly in

geology, biology, and ecology—can unveil the reality of nature. In other words, an aesthetically appropriate appreciation of nature is to appreciate it as it is characterized by natural history and natural science.

It seems that Carlson's scientific cognitivism is derived from Hepburn, though Carlson does not express this explicitly. Hepburn elaborates his opinion about the effect of knowledge on the aesthetic appreciation of nature with an example. As he says, when he is walking over a wide expanse of sand and mud, "the quality of the scene is perhaps that of wild, glad emptiness" (2004, 50). However, when he realizes that this is a tidal basin and the tide has been out, that is, he has a knowledge of this scene, then "the wild glad emptiness may be tempered by a disturbing weirdness" (2004, 50). Hepburn's famous example of "sand and mud" suggests that the aesthetic properties that natural objects seem to have are dependent on an observer's "knowledge" about their history and context. Before he realizes the scene is a tidal basin, the quality of the scene is probably "wild, glad emptiness." When observing it under the concept of a tidal basin, "[t]he wild glad emptiness may be tempered by a disturbing weirdness." But Nick Zangwill holds a different position, namely a moderate formalism, as he says. He argues that both "wild, glad emptiness" and "disturbing weirdness" can be aesthetic properties. The difference is that the former may be an intrinsic one and the latter a relational one (2001, 217-218). If we call Hepburn and Carlson supporters of non-formalism, which is compared to traditional formalism, then Zangwill is a neutralist, because Zangwill argues that both formal beauty and non-formal beauty exist. As for Carlson's scientific cognitivism, Zangwill thinks that there is a demanding form and a less demanding form. The former is related to a correct scientific natural category, and the latter—to correct common-sense natural categories. He claims that he partly agrees with Carlson about biological nature.¹ He admits that the kind of object to be appreciated sometimes matters. "If so, we have cases of dependent beauty. But I think that nature also has purposeless beauty" (2001, 212). It is quite evident that Zangwill follows a Kantian formalist approach to natural beauty. It is a hint that we can fall back on Kantian aesthetics to find some useful resources.

Also, Carlson argues that natural objects are such things or creations that are independent of our involvements. He states that we do not create nature like we create art, though, we do know a great deal about nature. It is a direct comparison between art appreciation and the appreciation of nature.

¹ This bears upon an idea that biological things are beautiful qua the biological kind they are.

For Carlson, when one experiences the natural environment, the experience is of “blooming, buzzing confusion,” and knowledge of the natural environment is needed to temper it. Knowledge also sets “appropriate boundaries” of appreciation (1979, 274).

He critiques both Noël Carroll’s “arousal model” of nature appreciation and Stan Godlovitch’s “mystery model” of nature appreciation, both of which argue that knowledge about nature is not essentially necessary to the aesthetic appreciation of nature (Carlson 1995, 393). As Noël Carroll puts it, Carlson’s model has neglected appreciations in which observers’ emotions are aroused by nature. For example, one stands under a waterfall and feels excited for its grandeur. In this case, the aesthetic appreciation of nature is independent of any scientific categories (1993, 245-253). Godlovitch claims that the only appropriate aesthetic regard for nature is a sense of mystery, which cannot be apprehended from the cognitive-scientific point of view (1994, 22-27). Carlson also makes some responses to the other two environmental philosophers, Malcom Budd and Emily Brady. Both are “non-cognitive” supporters and owe a debt to Hepburn and Kant. Budd does not think scientific knowledge is necessary for the aesthetic appreciation of nature and claims that the aesthetic appreciation of nature ought to be “the aesthetic appreciation of nature as nature” (Carlson 2005, 106-113). Emily Brady doubts the practical application of Carlson’s environmental model and argues that it is imagination rather than knowledge that plays a significant role in the aesthetic appreciation of nature.

I shall not further discuss Allen Carlson’s valuable critiques to other views here. Rather, I shall concentrate on the role of knowledge in the aesthetic appreciation of nature. My starting point is anti-cognitivism in the aesthetic appreciation of nature. It is a prerequisite in the formation of my position. I have two objections to Carlson’s scientific cognitivism, one on a practical level and the other on a theoretical level.

The Role of Scientific Knowledge

First and foremost, my article is inspired by Mark Twain’s description of his great disappointments that came from knowing the Mississippi river so well. I find Twain’s experience to be representative, and his description is highly exemplary of the inapplicability of scientific knowledge to aesthetic judgments. In this section, I take Mark Twain’s aesthetic experience to state that scientific cognitivism may not apply to the practical aesthetic appreciation of nature. The essential problem lies in the negative role of scientific knowledge in the process of making aesthetic judgments.

In the ninth chapter, "Continued Perplexities", of his book entitled *Life on The Mississippi*, Mark Twain recollects his aesthetic experiences from the time he was a beginner on a steamboat up to the moment when he became a professional sailor. His aesthetic appreciation of nature turns from a feeling of pleasure to displeasure, even to a feeling of frustration. When he was a beginner, he did not know the Mississippi river but he did feel pleasure when appreciating it. In contrast, when he became a sophisticated sailor, he learned every aspect of the river; however, he lost the precious aesthetic appreciation of the river. "All the grace, the beauty, the poetry had gone out of the majestic river!" (1962, 65). He makes a comparison between before

I still keep in mind a certain wonderful sunset which I witnessed when steamboating was new to me. A broad expanse of the river was turned to blood; in the middle distance the red hue brightened into gold, through which a solitary log came floating, black and conspicuous; in one place a long, slanting mark lay sparkling upon the water; in another the surface was broken by boiling, tumbling rings, that were as many tinted as an opal (1962, 64).

and after

I stood like one bewitched. I drank it in, in a speechless rapture. The world was new to me... Then, if that sunset scene had been repeated... inwardly, after this fashion: This sun means that we are going to have wind to-morrow; that floating log means that the river is rising, small thanks to it; that slanting mark on the water refers to a bluff reef which is going to kill somebody's steamboat one of these nights, if it keeps on stretching out like that; those tumbling "boils" show a dissolving bar and a slick water over yonder are a warning (1962, 65-66).

All the romance and beauty has disappeared from this river. Thus, Mark Twain's experience shows that scientific knowledge may be detrimental rather than helpful to the aesthetic appreciation of nature. In other words, the former aesthetic judgment of nature² turns into the latter cognitive

² In the terminology of environmental aesthetics, the notion of the aesthetic appreciation of nature is widely used. I would like to change it to aesthetic judgments adequately in this text for the convenience of my argumentation. I doubt that the concept of "appreciation" is inappropriately used in the environmental aesthetics, because "appreciation" presumes the object is beautiful rather than anything else. Certainly, in the account of the theory of positive aesthetics, every object in primary nature is beautiful and valuable to be appreciated (they do not say "to be judged"), in this sense, they say "appreciation", which is reasonable.

judgment of nature with scientific knowledge. Is it true that scientific knowledge makes Mark Twain's feelings of pleasure disappear? The answer is yes. But how did this process happen?

Before I elaborate my answer to the question above, I owe my readers an explanation of the rationality of his aesthetic experience taken as suitable evidence for my argumentation. Primarily I need to confirm that Mark Twain's knowledge about nature, under the condition of his being a sophisticated sailor, belongs to the so-called scientific knowledge of Carlson. It seems to me that Carlson does not give a concrete definition of scientific knowledge; however, he does refer to natural history and natural science, particularly to geology, biology, and ecology.³ His position is analogous to Walton Kendall's art appreciation. Natural history provides background information on nature and natural science presents categories and functions (purposes) of nature. Obviously, in terms of nature, scientific cognitivism probably can be understood as a function-based or purpose-based model for the aesthetic appreciation of nature.

In Twain's case, scientific cognitivism had been foreign to him until he became a professional; he gained awareness of the meaning of the sunset, floating log, slanting mark, etc. The sunset means a windy day tomorrow, a floating log means the river's rising, and the slanting mark means "a bluff reef." Here "the meaning" in fact indicates functions or purposes of different objects in the river, or objects related to it, in terms of fundamental knowledge in the field of steamboating. Though we cannot know how Mark Twain gained his knowledge, either from a guidebook or training from experienced professional sailors. Regardless, the "meaning" of different objects in the Mississippi River refers to functions (purposes). We can conclude that what he has learned belongs to scientific knowledge in Carlson's sense. Even if someone maintains that Twain's knowledge of the river might be common sense—that "the sunset means a windy day tomorrow" might be basic information to those who live by the river—we could also say that Twain's recognition belongs to scientific knowledge in the sense of Carlson. Carlson does elaborate knowledge in this sense as something "provided by the natural sciences and their commonsense predecessors and analogues" (1995,

³ See the first section "THE SCIENTIFIC COGNITIVISM". Carlson also uses words such as information, justified belief, common-sense apart from knowledge, but it shows no sign that these terms can be replaced with each other. From my reading, I hold that it may sound more unified if we describe these words as 'function (purpose)-based'. I shall call Carlson's scientific cognitivism as a function(purpose)-based model for aesthetic appreciation of nature.

398). Sometimes Carlson seems to refer knowledge to common sense as well. As he mentions, "this knowledge, essentially common sense/scientific knowledge, seems to be the only viable candidate for playing the role in regard to the appreciation of nature which our knowledge of types of art, artistic traditions, and the like plays in regard to the appreciation of art" (1979, 273). Also, Patricia Matthews summarizes his understanding of knowledge: "Carlson describes the relevant knowledge as that of natural science, ecology, natural history and commonsense" (2002, 37). Thus, it does not matter if Twain's knowledge belongs to a specific category of knowledge or just common sense. We can argue that Twain's knowledge about the river is the so-called scientific knowledge in the sense of Carlson. Now, I shall argue that it is this scientific knowledge that taints the feeling of pleasure in the aesthetic appreciation of nature.

In Kantian aesthetics, there are pure and impure judgments of taste. Pure judgments of taste do not fall under a concept, and as a result, the judgment expresses free and natural beauty. An impure judgment of taste is a combination of pure judgments of taste, which are non-cognitive, and cognitive judgments based on concepts. In Twain's case, if we make his aesthetic judgments of the Mississippi River into simple sentences such as "The sunset is beautiful" (before) and "The sunset is not beautiful" (after), this kind of judgment would be understood as both a pure judgment of taste and a compound judgment of taste.

On one side, that kind of judgment could be regarded as a pure judgment of taste. It is because Mark Twain judges the river as beautiful, which is irrelevant to whether there is a sunset or not. It is not grounded in a concept. On the other side, that judgment could also be deemed as an impure judgment of taste. For he truly knows the meaning (purpose) of the sunset and makes a compound judgment: "the sunset is beautiful, and it fulfills its purpose perfectly." This judgment is made according to the concepts of this object and functions it is supposed to have. The first part of the sentence is a pure judgment of taste; the second part, however, is a compound one, for it is determined by a concept of the object, the sunset, and what it is supposed to be or to do; this judgment demonstrates how well the object fulfills this concept. Nevertheless, the truth is that the second point cannot find grounding in Mark Twain's case. In the situation where he knows the ecological purpose of the sunset, namely it shows whether the wind will blow tomorrow or not, his aesthetic judgment, "The sunset is beautiful", is false. If the first judgment is a pure judgment of taste, then the second cannot be denied as an impure judgment of taste with a "negative" judgment in it.

The comparison by Mark Twain visibly shows that Twain's feeling of pleasure is corrupted after he obtains (scientific) knowledge about the river, including the meanings of the different ways the sun can appear, hints produced by logs floating in the river, implications represented by marks on the water, etc. It cannot be denied that it does exist in cognitive aspects in judgments of taste, but only in impure ones. And it is not hard to conclude that scientific knowledge bears on Twain's appreciation of the natural object. This information can also be found in Kant's theory. Kant holds that in the judging of a free beauty the judgment of taste is pure. When concepts of the given object are presupposed, the imagination would be restricted (5:229).⁴ Kant believes that the tattoos of the New Zealanders, even though they may be beautiful, arouse a negative impure judgment of taste about a human being so adorned (5:230). The subtle difference between Twain's case and Kant's theory is noteworthy. The distinguishing point is that Twain's familiarity with the river causes an aesthetically irrelevant judgment of the natural object. His judgments change as his subjective identity changes. At first, he is just an ordinary person who perceives the river which is new to him. Later, he becomes an outstanding sailor. That means that the purposes of his subjective cognitive qualities must be adjusted. Another question inevitably arises: is it the case that someone who has a large amount of knowledge can never be a "pure" appreciator again? Nonetheless, this is not the main problem to be solved here.

As Kant says in the *Critique of the Power of Judgment*, the reason why we find some natural objects beautiful is that they seem to be purposive for our cognitive faculties, in other words, they have been designed perfectly for our pleasure. The Mississippi River which Twain perceives at first shows him only its surface form. The "wonderful sunset," "solitary log," and "slanting mark," and the qualities they represent, provide visually accessible information, which is reflected in Twain's outer intuition. Later, as a professional sailor, he only pays attention to the functions of the river, and hardly judges the river with the approach of pure taste.

Carlson's scientific cognitivism attempts to guarantee objectivity to the aesthetic appreciation of nature. He continuously emphasizes "correctness" and "right." He draws on Kendall L. Walton's "Categories of Art" to argue that knowledge of the natural sciences, particularly in geology, biology, ecology, and natural history enables us to perceive nature in a correct category, as he says, "The natural environmental model holds that in

⁴ References to *Critique of the Power of Judgment* follow the pagination of vol. 5 of the Akademie edition. The translations are from Kant 2000.

the appropriate appreciation of nature the required information, justified belief, or knowledge is that which is provided by the natural sciences and their commonsense predecessors and analogues" (1995, 398). But as we can see, even before Mark Twain had learned much about the river, he already knew the "sunset," "log," or "mark." The meanings of these objects belong to the realm of Carson's scientific knowledge, but only in a wider sense, but if in terms of accuracy, they may be no more than common-sense. As I mentioned above, common sense also consists of knowledge as understood by Carlson. From the perspective of Kantian aesthetics, the sunset, if it is indeed beautiful, is not beautiful as a sunset, but because the form of the sunset agrees with a form which the imagination of the appreciator has invented on its own. The aesthetic judgment of nature is not determined by concepts.⁵ It gives us an explanation of how Mark Twain can make such an aesthetic judgment of nature while being illiterate of the river. In environmental aesthetics, and in some Kantian aesthetics as represented by Emily Brady, it is argued that knowledge is not always essential for appreciation. Furthermore, Brady states that Carlson's emphasis on scientific knowledge for framing appreciation raises a practical problem for his model (1998, 141). Apart from that, she also suggests a nonscience-based model, to be specific, the imaginative model. This model draws on "our perceptual and imaginative capacities to provide a foundation for aesthetic appreciation of nature" (1998, 142), which is Kantian because it includes "disinterestedness as a guide to appropriate appreciation" (1998, 142). Brady's theory is plausible. In this sense, the aesthetic experience of Mark Twain presents a process leading from "disinterestedness" to "interestedness", and only the first judgment is an aesthetic judgment of nature, while the second judgment is a consequence derived from scientific cognitions of the river.

In addition, the role of knowledge in aesthetic appreciation reflects the faculty of understanding. As Kant says, our cognitive faculties consist of imagination and understanding (5:249). Judgments of taste depend on whether they are determined by imagination or understanding. Both faculties take effect during the process of forming a judgment of taste. But when we make a judgment of taste, it is the imagination, not understanding, that

⁵ Nevertheless, this is only true in respect to the judgment of beauty but not in respect to Kant's judgment of the sublime. Here I shall only discuss the case of natural beauty of Kant's judgment in that the original aim of environmental aesthetics is natural beauty, but the sublime should not be neglected. In Hepburn's "sand and mud" example, he also argues on natural beauty instead of the sublime. In addition, Carlson's scientific cognitivism does not specifically differentiate these two cases. I would say it is promising to make another comparison in the case of the sublime, but in this text, it would seem far-fetched.

reacts to the representation of nature, even though imagination is likely connected with understanding. As Kant declares, "In order to decide whether or not something is beautiful, we do not relate the representation by means of understanding to the object for cognition, but rather we relate it by means of the imagination (perhaps combined with the understanding) to the subject and its feeling of pleasure or displeasure" (5:203).

If we clarify the role of the faculty of understanding in the judgment of taste, the role of knowledge in the aesthetic appreciation of nature can be elucidated as well. To put the question in another form: to which extent does the faculty of understanding take effect in a judgment of taste so that the judgment of taste can be separated from a cognitive judgment? Kant's solution to this question is that, in aesthetic judgment, imagination and understanding work together with "free harmony," or that aesthetic judgment is the result of "free play" between imagination and understanding. As we can see, the faculty of imagination itself has no boundaries, but the faculty of understanding is lawful so that it can help to determine judgment. Thus, "free" here is attributed more to the faculty of imagination.

Imagination provides intuitions, while at the same time understanding supplies it with determinate concepts. In a cognitive judgment, the faculty of imagination is dominated by the faculty of understanding, which means intuitions must be subsumed under determinate concepts. In the aesthetic case, it is the contrary; it ends up in a continued exchange between imagination and understanding, "no determinate concept of the understanding ever proves adequate to subsume the manifold of intuitions presented by the imagination" (Rueger 2007, 143). Twain's regret is produced because his judgment of the river turns into a cognitive one, in the end, moreover, an aesthetic one can never be made again due to the overwhelming domination of his faculty of understanding over the imaginative faculty in the appreciation. From that, we can learn about the vulnerability of imagination.

Carlson makes attempts to ground objectivity for the aesthetic appreciation of nature by imposing scientific knowledge on subjectivity. In his sense, to make certain the appropriation of aesthetic appreciation of nature, subjects must experience nature with premier knowledge. This model may appear rough because it overemphasizes the role of knowledge in the appreciation of nature. Besides, this model fails to explain that to which extent scientific knowledge plays its role so that the aesthetic quality of nature appreciation can be guaranteed. In Kant's case, he also intends to find an objective ground for the pure judgment of taste. His solution to it is the universal validity of judgments of taste. In the following section, we can examine the differences between these two formulations.

“Free” Nature vs. “Objective” Nature

In this section, I argue that Kant’s “free”-nature approach may be more appropriate for the aesthetic appreciation of nature than Carlson’s “objective”-nature approach. As Carlson’s scientific cognitivism puts it, when we appreciate nature, we may appreciate forms, such as shape, color, etc., just as we appreciate art. But if we want to make correct aesthetic judgments, and experience deeper appreciation, it is essential for us to confirm its correctness. It is necessary for us to obtain knowledge of the appreciated objects, and know aspects of nature that make the categories of natural objects clear so that we can correctly appreciate them in the proper categories. Also, we must grasp the knowledge of how we should appreciate them (Carlson 1981, 17). His approach is to justify the “appropriation” of the aesthetic appreciation of nature by knowledge, in his sense, which means something can demonstrate an “objective” nature.

It seems like Carlson’s scientific cognitivism is similar to the notion of “perfection” [*Vollkommenheit*] of the rationalists from the eighteenth century. This so-called “perfection” refers to the concept of what the judged object is supposed to be, and this resembles “right categories” in Carlson’s sense. As previously mentioned, we can consider Carlson’s scientific cognitivism as a function(purpose)-based model. Unlike the rationalists, Kant argues that the judgment of taste about beauty is “entirely independent from the concept of perfection” (5:226) in the *Critique of the Power of Judgment*. Thus, the Kantian theory may help state the weakness of Carlson’s function-based model.

It is the question of how can an aesthetic appreciation be possible while containing cognitive aspects, which is essential for us to elucidate. Or, how can there be a guarantee that natural objects will be both “free” (aesthetic) and “objective” (on their terms) in aesthetic appreciation at once? I aim to explain why Carlson’s scientific cognitivism fails to demonstrate cognitive aesthetic judgment as aesthetic, in contrast, the Kantian strategy is so convincing that it is reasonable to see how an aesthetic appreciation of nature can contain cognitive components.

It is well known that Kant regards natural beauty as “free beauty” and believes that such beauty is irrelevant to any concepts (5:229). In the “Analytic of the Beautiful,” Kant argues that judgments of beauty have contradictory characteristics. On the one hand, they provide a feeling of pleasure, which is “subjective” rather than “logical,” namely, they are irrelevant to cognition of the objective features of objects to be judged. Aesthetic judg-

ments are made not under a concept, let alone a category. On the other hand, they are universally valid, which means that an object is beautiful during the formulation of aesthetic judgment. One is entitled to demand an agreement in the name of everyone else. These judgments of beauty are non-cognitive; they are not based on the concepts of judged objects, and they refer to a pleasurable state of the subject. But do any cognitive judgments exist at all? They do, but not as aesthetic judgments, nor judgments of taste. Aesthetic judgments are not cognitive. No concept should be involved in the aesthetic appreciation of nature. Judgments of taste in the “pure” form are non-cognitive judgments. They are not based on the concepts of objects to be judged. But how does Kant solve the dilemma of judgments of taste—subjective while universally valid? According to Kant, judgments of taste are subjective rather than cognitive in that they refer to the pleasure of the subject rather than the concepts of the object. They are universally valid since every human being can have cognitions. The universality of judgments of taste is based on the universality of cognitions. After that, (pure) judgments of taste possess an *a priori* principle.

Nevertheless, it is remarkable that although Kant’s idea of “adherent beauty” violates this theory, it does belong to another type of beauty apart from “free beauty.” Kant gives primacy to free beauty over adherent beauty since he has found the *a priori* principle for free beauty and he regards beauty as a symbol of morality because of the freedom of nature.⁶ In the third *Critique*, he writes some words in §16 for adherent beauty. He claims that beauty consists of free beauty and adherent beauty, in which the latter depends on a judgment of perfection. Adherent beauty appears to rely on

⁶ As for the primacy of free beauty and the history of adherent beauty, see references such as Robert (2018, 327). As he says, “As long as Kant had not found a way of justifying the claim to universal validity of ‘pure’ judgment of taste, he may have thought that beauty combined with usefulness had a more secure (hence, ‘self-sufficient’) claim to validity than beauty without usefulness. Sometime in the 1780s, and likely toward the second half of the decade, Kant thought he had found such a justification: a ‘deduction’ of ‘pure’ judgments of taste.” In the pre-critical treatise, Kant characterizes the adherent beauty as “self-standing” [*Selbst-ständig*] in that the grounding in concepts help strengthen the enduring quality of judgments of taste. Based on this point, it appears that it does fit the fact when a person subordinates Kant’s theory of beauty roughly into anti-cognitivism, though the anti-cognitive free beauty draws more of his attention later in his critical period. Apparently, the opposite situation takes place in his pre-critical period. It is not until the 1780s when Kant “suddenly” discovers the *a priori* principle for free beauty that he instead uses “self-standing” to describe free beauty. This transformation indicates the primacy to free beauty in Kant’s theory, and it also shows Kant’s self-added philosophical aim to connect aesthetics and teleology, nature and freedom.

concepts, and due to that, it is not pure beauty. I tend to call “adherent beauty” the “unified model” of Kant in that the judgment of “adherent beauty” is a compound judgment, which unifies an aesthetic aspect and a teleological (cognitive/objective) aspect. It immediately evokes a paradoxical point; namely, why adherent beauty should be considered in terms of beauty at all. Rueger argues that the reason is due to “the conjunctive view of such judgments” (2008, 543). As he says, it seems that the conjunctive account of judgments of adherent beauty connects naturally with a view about “how to focus on the experience of free beauty by abstracting from the concepts involved in judgments of perfection” (2008, 543). In other words, the cognitive aspect in compound judgment might be ignored, and what remains is rightly a pure judgment of taste. Then Carlson’s function-based model seems to correspond to the cognitive part of Kant’s unified model. What is lacking in Carlson’s model is precisely a pure judgment of taste, or to be specific, a sense of “free” nature. His approach of taking concepts, as a prerequisite of the appreciation of nature, disobeys the basic principle of aesthetics, so it is hard for the appreciation of nature to be an aesthetic one.

In the Kantian sense, “free beauty” emphasizes the “free;” the imagination operates without the constraint of concepts, or it is a “free harmonious play” of the faculty of understanding and imagination. It indicates that natural objects are not aesthetically judged via concepts or categories. Nature itself should be free. Only when nature appears to subjects freely can they make an aesthetic judgment of nature. Nature’s free appearances can reflect the subject’s free imagination. It is a bilateral mechanism. Scientific cognitivism intends to let appreciated nature be “objective”; however, it fails to keep the freedom of nature. Carlson does not notice that knowledge can hardly be deemed as really “objective,” because knowledge is no more than representations of intellectual thoughts on nature, rather than the real truth of nature, so it is unable to ensure the objectivity of nature, not to mention the appreciation of nature.

In the academic field of environmental aesthetics, there are various assertions and advocations, which have one thing in common: the imperative to appreciate nature “as it is,” or “on its terms,” and not as art nor anything else. Since the 1960s, this strong argument coincides with a high sentiment to restore the significant role of nature in aesthetics. Drawing back on the history of research on natural beauty, the primacy of nature reaches its peak in Kantian aesthetics. Adorno argues that it is Kant who gives primacy to natural beauty (1970, 97-99), for Kant gives the aesthetic experience of natural beauty a significance of morality, which the experience of artistic

beauty lacks (Rueger 2007, 145). Even in Kant's theory, there is no sign that the role of knowledge or the objectivity of nature should be valued in aesthetic judgments. Rather, when the proportion of understanding dominates over the faculty of imagination, it will result in the aesthetic judgment turning into a cognitive judgment. Nevertheless, it is still an aesthetic judgment in the case of "adherent beauty." Thus, in the appreciation of natural beauty, subjects don't have to consider the objectivity of nature. Nature freely appears to us, and we freely appreciate natural beauty.

As it is known, Kant holds a subjective perspective on natural beauty; therefore, we can hardly say that Kant's approach aims to maintain the objectivity of nature. However, I still want to bring up the principle of aesthetic disinterestedness here to discuss the weakness of Carlson's scientific cognitivism. In the first moment of the judgment of taste, Kant introduces the notion of disinterestedness to distinguish the feeling of pleasure in three different cases: the beautiful, the agreeable, and the good. As for the meaning of interestedness, Kant says, "the satisfaction that we combine with the representation of the existence of an object is called interest" (5:204). Thus, disinterestedness is not relevant to the existence of an object. Only when the feeling of pleasure, combined with the beautiful, is independent from the existence of an object can a judgment of taste be made. Kant keeps the objectivity of natural objects, to be judged through an abstraction of subjective interests, away from the natural objects' existence. Thus, disinterestedness is an attempt to pursue the objectivity of the activity of the aesthetic judgment of natural beauty. As such, the notion of disinterestedness affirms that the perception of an object is "for its own sake" rather than for an observer's sake, or we say, the notion of disinterestedness presents an "objectivity without the object," in which the objectivity is referred to the universality of the pleasure with the beautiful. However, Arnold Berleant holds that a disinterested attitude may have been appropriate for eighteenth-century art and aesthetics but appears to be outdated for contemporary aesthetics. According to him, disinterestedness leads to the "transformation of experience into an intellectual puzzle that loses sight of the perceptual immediacy at the heart of [the] aesthetics" (Berleant, Hepburn 2003). Contrarily, Ronald Hepburn argues that aesthetics has no obligation to remodel itself as a response to any trend or fashion in the contemporary developments of arts. He holds that disinterestedness has several roles, including a formal role, an epistemological role, and the role of "overcoming of the anxious flux of everyday events and the 'interested' activity (self-interested, most often) that aims, but fails, to bring calm out of conflict" (2003). What's more, disin-

terestedness indicates how to experience, to appreciate, or to grasp without interest. As Hepburn says, "To me, there is no problem about including cognitive components within an aesthetic whole. In general, aesthetic experiences would become greatly impoverished without them" (2003). From the perspective of Carlson's function-based model, a person can hardly appreciate natural objects "without interest," because the scientific knowledge in their sense is related to purposes, utilization, or kinds of natural objects.

Following the study above, it is not difficult to notice that scientific cognitivism appears to be a small revival of the rationalists' view from the eighteenth century. In response to the rationalists' view, Kant put forward the notion of "free" beauty. Nevertheless, it does not mean Kant can be directly included in the anti-cognitivist school. "Free" beauty gains more attention because free beauty, in nature, contributes more to Kant's theory of morality than adherent beauty. In this sense, Carlson's model concentrates excessively on the purposes of natural objects, but it turns out that this model is powerless not only to undertake the ideal objectivity of natural objects but also to satisfy the basic aesthetic requirement.

All things considered, scientific cognitivism is a theory celebrated in the background of the environmental movement, which has an eager requirement to rebuild the model of the appreciation of nature, protecting the environment to the greatest extent, while preserving its beauty. In this sense, this theory is more useful for decision-makers and authorities responsible for environmental protection or design, rather than for appreciators. Scientific knowledge may decrease feelings of pleasure in an aesthetic judgment. Sometimes a feeling of pleasure is produced by innocent or pre-cognitive wonder. Scientific knowledge might constrain the free wings of imagination. As Zangwill says, "I think childlike wonder is often more appropriate" (2001, 224). And in the appreciation of nature, where the cognitive faculty suppresses the imaginative faculty (sensations, intuitions), it is less likely to be deduced as a judgment of free beauty. It can hardly be accepted as an approach of appreciating nature in its terms.

It is inappropriate to make an analogy of the aesthetic appreciation of nature with the case of art. The appreciation of art may require knowledge of art history and art criticism, but art is produced to fulfill various purposes. Natural creation, however, is a different case. In the aesthetic appreciation of nature, natural objects accidentally reach a correspondence with subjective satisfaction, which is not determined by any concepts of the objects. One is not required to know different representations of a natural object or to have

a scientific explanation before one can make an aesthetic judgment. To recapitulate, the two problems in scientific cognitivism are: (i) knowledge does harm to pleasurable feelings on the practical level of the aesthetic appreciation of nature; (ii) on the theoretical level of environmental aesthetics, it pursues the intangible objectivity of nature rather than the representations of nature and turns out to be another adjacent analogy to art theory. No matter if in a practical sense nor a theoretical sense, scientific cognitivism can hardly lead to an appropriate aesthetic appreciation of nature.

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