



Experimental Philosophy of Aesthetics

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Abstract

In the past decade, experimental philosophy – the attempt at making progress on philosophical problems using empirical methods – has thrived in a wide range of domains. However, only in recent years has aesthetics succeeded in drawing the attention of experimental philosophers. The present paper constitutes the first survey of these works and of the nascent field of ‘experimental philosophy of aesthetics’. We present both recent experimental works by philosophers on topics such as the ontology of aesthetics, aesthetic epistemology, aesthetic concepts, and imagination, as well as research from other disciplines that not only are relevant to philosophy of aesthetics but also open new avenues of research for experimental philosophy of aesthetics. Overall, we conclude that the birth of an experimental philosophy of aesthetics is good news not only for aesthetics but also for experimental philosophy itself, as it contributes to broaden the scope of experimental philosophy.

1. *Neuroaesthetics, Empirically Informed Aesthetics, and Experimental Philosophy of Aesthetics*

1.1. AESTHETICS AND THE COGNITIVE SCIENCES

In the past decade, there has been an increasing number of empirical works conducted by philosophers aiming to make progress on traditional philosophical questions using methods from cognitive sciences, most of which have since been labeled as ‘experimental philosophy’ (Knobe 2007). However, even though experimental philosophy has thrived in such fields as epistemology (Alexander and Weinberg 2007) or philosophy of action (Sommers 2010), it has not yet done so in aesthetics.

This is all the more surprising because there are obvious natural connections between aesthetics and cognitive sciences: aesthetics is not only interested in aesthetic properties, be they instantiated in natural objects or works of art, but also in aesthetic experience and the psychological mechanisms underlying the appreciation of said aesthetic properties (Stokes, 2009). For example, imagination is a topic that has attracted the attention both of cognitive scientists and aestheticians, fostering exciting interdisciplinary dialogues (see, for example, Paul Harris’ work on imagination in Harris, 2000, but also the discussion of imagine resistance by Weinberg & Meskin 2005, 2006, grounded on the account of imagination developed by Nichols and Stich, 2006). Moreover, these natural connections, far from being ignored, are already acknowledged by both neuroaesthetics and empirically informed aesthetics.

Neuroaesthetics can be considered as the contemporary heir of earlier attempts at establishing an empirically grounded aesthetic psychology, which can be traced back to the 18th century, when philosophers such as Wolff (1964) made empirical psychology based on observation, one of the goal of philosophical inquiry. This movement culminated in the field that came to be known as ‘experimental aesthetics’ (Fechner, 1876). Nowadays, neuroaesthetics investigates aesthetic experience and production through contemporary neuroscientific techniques, in the

aim of determining which neural systems underlie aesthetic appreciation and creation (Chatterjee 2011; Livingstone, 2002; Ramachandran & Hirstein, 1999; Zeki, 1999). Yet, neuroaesthetics is still in its infancy and has been criticized for its inability to capture the complexity and contextual sensitivity of aesthetic practices and feelings (e.g. Brown & Dissanayake, 2009; Hyman 2010). Some recent works aim to incorporate these different aspects into the scientific understanding and investigation of art (e.g. Bullock and Reber 2013), but much still needs to be done. More importantly, while these approaches might appear akin to experimental philosophy of art, they actually have very different scopes and ambitions. Aesthetic psychology and neuroaesthetics are first and foremost interested in the workings of the mind in its interaction with art, rather than in art itself and the philosophical questions it poses. As a recent review of the field defined it, neuroaesthetics is ‘concerned with the neural underpinnings of aesthetic experience of beauty, particularly in visual art’ (Cinzia & Vittorio 2009). However, aesthetics is concerned with much more than the experience of beauty.

This has not refrained aestheticians from examining the results of empirical sciences and discussing what philosophical consequences could be drawn from them. Such ‘data-mining’ is what we will call here empirically informed aesthetics. Fascinating work has been produced in recent years by aestheticians willing to confront traditional aesthetic problems to the results of empirical sciences (see Schellekens & Goldie 2011, and Currie et al. 2014, for representative samples of this kind of work). Psychological research on text processing, for example, has recently been put to good use in understanding issues such as our engagement with fiction and non-fiction, and in avoiding misconstructions of the difference between the two kinds of works (Friend 2014; Matravers 2014). Similarly, data and theories from cognitive sciences have been used by Gregory Currie and Noel Carroll in their investigation of films (Carroll 1990; Currie 2008), by Lopes and Rollins in their study of depiction (Lopes 1999, 2003; Rollins 1999), and by many philosophers concerned with our emotional responses to fiction (Currie & Ravenscroft 2002; Tullmann & Buckwalter 2014). Overall, there is a growing sensitivity to the idea that empirical sciences must be taken into account in our ambition to understand aesthetic objects and processes.

Of course, empirically informed aesthetics is not yet experimental aesthetics (see Prinz 2008, for the distinction between empirical and experimental philosophy): indeed, experimental philosophers do not satisfy themselves with integrating the results of empirical sciences, but run their own experiments. However, given that many aestheticians already acknowledged the value of empirical data for aesthetics and that neuroaesthetics already provided the empirical tools to gather such data, one can only wonder why experimental aesthetics took longer to emerge than experimental ethics or experimental epistemology.

1.2. EXPERIMENTAL PHILOSOPHY AND THE ROLE OF INTUITIONS IN AESTHETICS

One shallow, sociological explanation for this fact is that too many philosophers tend to overlook aesthetics: a poll conducted in 2012 about the most important areas in philosophy resulted in ‘philosophy of art’ being ranked near the bottom (Leiter 2012). There is nevertheless an alternative and more philosophically interesting explanation: at its beginning, experimental philosophy tended to focus solely on intuitions and the psychological mechanisms underlying them (Nadelhoffer & Nahmias 2007; Knobe & Nichols 2008). However, compared to areas such as epistemology and moral philosophy, philosophical aesthetics relies more on actual works of arts and aesthetic practices and less on intuitions about thought experiments (Liao et al. 2014; but see Kamber 2011). Taken together, both these facts might explain why aesthetics has failed to attract experimental philosophers’ interest for so long.

However, in the past few years, this *narrow* conception of experimental philosophy, according to which experimental philosophy is *only* the empirical study of philosophically relevant intuitions, has been challenged in favor of a *broader* conception, according to which experimental philosophy can be understood as the attempt at making progress on philosophical problems by conducting controlled experiments (Cova 2012; Rose & Danks 2013; O'Neill & Machery 2014). This broadened approach allows for the exploration of experiences and practices that constitute data for philosophical aesthetics, and it is maybe no coincidence that this broader conception of experimental philosophy has been temporally synchronous with the first attempts at developing a genuine experimental aesthetics.

This paper has two goals: firstly, to provide a comprehensive snapshot of the work done so far in experimental philosophy of aesthetics, including ongoing and unpublished works; secondly, because experimental philosophy of aesthetics is only in its infancy, to provide a tentative image of what experimental philosophy of aesthetics *could be*, which questions it could help us answer, and which methods it could use. To this aim, we will not restrict ourselves to works labeled as 'experimental philosophy', but will also discuss studies conducted by researchers in other disciplines that might impinge upon important aesthetic questions.

2. Experimental Philosophy of Aesthetics: A Snapshot

In his presidential address to the American Society of Aesthetics, Kendall Walton (2007) says that aesthetics is a philosophical field with no grand, unifying question; instead, it contains many smaller questions that relate to, and overlap with, questions in other philosophical areas such as ethics, epistemology, philosophy of mind, and philosophy of language. We see the same pattern in experimental philosophy of aesthetics today: many works are informed by, and can potentially inform, experimental philosophical works in cognate philosophical areas. For this snapshot overview, we will focus on four intersections: objectivity of value (ethics), formation of aesthetic beliefs (epistemology), aesthetic concepts (mind and language), and imagination (mind).

2.1. THE OBJECTIVITY OF AESTHETIC VALUE

One of the first published papers explicitly claiming to apply the methods of experimental philosophy to aesthetic questions was concerned with the ontological status of aesthetic values. In this paper, Florian Cova and Nicolas Pain (2012) discuss a widespread argument for aesthetic realism (the thesis that aesthetic values exist in such a way that they provide apt ground for the intersubjective truth of aesthetic statements): the idea that aesthetic realism is *ceteris paribus* the best available thesis because it is in line with common sense about aesthetic properties (Zangwill 2001; Rehault 2013). One of the premises of this argument draws on the idea, popularized by Immanuel Kant (1790/1928), that laypeople (and not only experts) do not treat their aesthetic judgments as mere subjective preferences but instead claim universal validity for them. Explaining this property of aesthetic judgment has been an important goal for aesthetics: Nick Zangwill (2001) goes as far as to call it the 'Big Question' of aesthetics. However, in the wake of experimental philosophy, armchair claims about common sense have become increasingly dubious, and this is why Cova and Pain decided to test whether people really made a distinction between aesthetic judgments and expressions of mere subjective preferences.

They gave 60 French undergraduates 15 vignettes describing several kinds of disagreements between two interlocutors: subjective disagreement (e.g. disagreement about whether some food tastes good or bad), factual disagreement (e.g. disagreement about whether Proust is the author of *In Search of Lost Time*), and aesthetic disagreement (e.g. whether a given painting, song

or landscape is beautiful or ugly). For each kind, participants had to choose between the four following possibilities:

- (a) One of the interlocutors is right while the other is wrong.
- (b) Both are right.
- (c) Both are wrong.
- (d) Neither is right or wrong. It makes no sense to speak in terms of correctness in this situation. Everyone is entitled to his own opinion.

As expected, most participants chose solution (a) for factual disagreements and (d) for subjective disagreements. However, it also turned out that most participants chose (d) for aesthetic disagreements, and that the rate of participants choosing (d) did not significantly differ between subjective and aesthetic disagreements. This suggests that, contrary to philosophical wisdom, laypeople do not claim universal validity for aesthetic judgments.

However, there are alternative explanations for these results: maybe participants did not feel attracted by the realist answer (a) because they were not personally involved in the disagreement, or did not really know the artwork at stake. To control for these possibilities, Cova and Pain designed another study in which French participants were first instructed to describe an object they personally found very beautiful, then asked to imagine that someone was disagreeing with them, claiming that said object was not at all beautiful. Here again, participants had to choose, among answers (a) to (d), which best described the situation according to them. And here again, very few participants (10%) chose answer (a).

Because one might be worried about the generalizability of results collected on such a small sample of French students, it is important to note that unpublished studies have found the same results in different and wider population. For example, Cova and Goffin (2015) obtained similar results using thick aesthetic terms such as ‘elegant’ in a population of 140 United States resident recruited through Amazon Mechanical Turk. In addition, the ‘Intellectual Humility and Cultural Diversity in Philosophy’ project, led by Stephen Stich and Edouard Machery, replicated Cova and Pain’s second study across 22 countries. Although interesting cross-cultural differences have been found, the realist answer was consistently the least chosen answer.

Finally, it is important to signal that these results are consistent with those of psychologists Geoffrey Goodwin and John Darley (2008) who, using a similar method to investigate folk moral objectivism, went as far as using aesthetic judgments as paradigmatic examples of subjective judgments. However, they clash with results obtained by Shaun Nichols and Trisha Fold-Bennett (2003) showing that children from age 4 to 6 years tend to treat aesthetic values as mind-independent. This suggests that there might be a developmental path, with people treating aesthetic values as less mind-independent as they grow older (Beebe & Sackris 2010). Exploring the complexities and development of folk ontology of aesthetic properties is thus one of the possible future avenues for experimental philosophy of aesthetics. Moreover, far from limiting itself to investigating whether people think aesthetic value is objective, experimental philosophy of aesthetics should also concern itself with what people consider to be the source of these values. Research by psychologist George Newman and his colleagues on the value of original works (versus perfect duplicate) might count as falling into this category (Newman & Bloom 2012, 2014; Newman, Bartels & Smith 2014; Smith & Newman 2014).

2.2. FORMATION OF AESTHETIC BELIEFS

Alongside questions about the objectivity of aesthetic value, philosophers have also traditionally been interested in its epistemology. Why do we hold certain aesthetic beliefs and not others? This basic question concerning the source of aesthetic beliefs can be given a normative and a descriptive

gloss. Philosophers have traditionally been interested in the normative question: Which factors *ought to* influence our aesthetic beliefs? Nevertheless, there is a related descriptive question that is of interest, if only implicitly: Which factors *do* influence our aesthetic beliefs? By understanding the psychological mechanisms that underlie the formation of our aesthetic beliefs, we can better separate the aesthetic beliefs that have epistemic worth from those that do not.

Take first-personal sources of aesthetic beliefs. Despite aesthetic disagreements, people tend to converge on judging some canonical artworks – e.g. Picasso's paintings – as good. What explains this convergence? Philosophers of art tend to prefer a *realist explanation*: people's aesthetic judgments primarily track the intrinsic aesthetic value of the works. In contrast, researchers outside philosophy of art tend to be skeptical and prefer an *irrealist explanation*: people's aesthetic judgments primarily track sociological forces that are irrelevant to intrinsic aesthetic value, if such a thing even exists.

Psychologist James Cutting (2003) sought support for the irrealist explanation in the psychological phenomenon known as the 'mere exposure effect' (Fechner 1876; Zajonc 1968). In one study, participants in the experimental group were shown impressionist paintings at the beginning of a class for two seconds without comment. One group of works was shown four times more frequently, over 21 classes, than the other group. This resulted in people preferring the group of works shown more frequently. Cutting concluded that consensus about works of art does not primarily track objective aesthetic properties, but is likely to be primarily the product of repeated exposure to certain works.

Not content with merely pointing out potential confusions in Cutting's studies, a number of philosophers of art sought to experimentally challenge Cutting's interpretation of his results. Aaron Meskin, Mark Phelan, Margaret Moore, and Matthew Kieran (2013) first noted that all of the stimuli in Cutting's study were works by impressionist masters. Hence, it could be that all these works have high intrinsic aesthetic value, and that exposure merely facilitates people's uptake of the works' intrinsic aesthetic value. If that is right, then Cutting's results are perfectly consistent with the realist explanation of people's aesthetic judgments.

To investigate this hypothesis, Meskin and colleagues employed both works that can be considered as having high intrinsic aesthetic value (works by Pre-Raphaelite painter John Everett Millais) and works that can be considered as having low intrinsic aesthetic value (works by contemporary American painter Thomas Kinkade). They then followed Cutting's procedure in briefly exposing these paintings to participants, who were students in a philosophy course at University of Leeds. What they found was that participants responded to the good and bad paintings differently after exposure. Although mere exposure raised participants' aesthetic judgments of good paintings, it also lowered participants' aesthetic judgments of bad paintings. This result can thus be seen as a partial defense of the realist explanation of aesthetic judgments: even if sociological factors, such as exposure via art history courses and textbooks, can influence people's aesthetic judgments, they may only be able to amplify the pre-existing effects of intrinsic aesthetic value.

Third-personal sources of aesthetic beliefs also offer matter for empirical inquiries. Although some of our aesthetic beliefs are based on first-personal experiences, many more appear to be based on testimony. For example, even if one has never seen *Sex and the City 2*, one might come to believe that it is not very good on the sole basis of reading scathing reviews of the film. A debated question in aesthetics concerns the epistemic status of beliefs formed on the basis of aesthetic testimony; for example, whether they can ever constitute knowledge.

In a project in progress, Aaron Meskin, Shen-yi Liao, and James Andow (2015) are investigating laypeople's treatment of aesthetic testimony in contrast with mundane testimony, or testimony about descriptive features. Their studies employed procedures that favor ecological validity, such as having participants read a film review that appears to have been extracted from

the Internet Movie Database, as well as procedures that allow for better control of confound variables, such as having participants read vignettes of highly abstract scenarios. Meskin and colleagues found that, in general, participants made asymmetric judgments about aesthetic and mundane testimony: they think that judgments formed on the basis of mundane testimony are more justified than judgments formed on the basis of aesthetic testimony. However, Meskin and colleagues also found that, in general, participants were willing to assign some epistemic value to aesthetic testimony: they do not think that judgments formed on the basis of aesthetic testimony are without epistemic merit.

2.3. AESTHETIC CONCEPTS

Epistemological questions about aesthetic beliefs, in turn, raise questions about how we think and talk about aesthetic experiences – i.e. questions about aesthetic concepts.

On the linguistic side, philosophical aestheticians have traditionally been interested in the way aesthetic concepts are used in communicating aesthetic experiences. As for experimental philosophers, they have begun to work with formal semanticists to empirically investigate segments of natural language. Merging these two threads together, there are now ongoing investigations into the nature of aesthetic language.

Liao and Meskin (in press) investigate the linguistic properties of common aesthetic adjectives such as ‘beautiful’, ‘ugly’, and ‘elegant’ – specifically, their context-sensitivity. In addition to its intrinsic interest, such an investigation into the linguistic nature of aesthetics concepts can also potentially help us understand various aspects of aesthetic communications. Ordinary people probably spend as much of their lives talking about art and other aesthetic objects as experiencing them. Consequently, the language through which people communicate their aesthetic experiences is worthy of philosophical aestheticians’ attention.

Before explaining the methods and results of Liao and Meskin’s studies, we need to expose the issue at stakes in their research. It is standard to divide gradable adjectives, or adjectives that admit of ‘more than’ constructions, into two classes (Kennedy et al. 2005). *Relative* gradable adjectives, such as ‘long’ and ‘tall’, are typically interpreted relative to a contextually determined comparison class. *Absolute* gradable adjectives, such as ‘spotted’ and ‘flat’, typically are not. Liao and Meskin set out to investigate whether aesthetic adjectives are better classified as relative or absolute.

Relative and absolute gradable adjectives can be distinguished via an empirical linguistic diagnostic called *the presupposition assessment task* (Syrett et al. 2010). The core idea is simple: since relative gradable adjectives are interpreted relative to a contextually determined comparison class, they can accommodate some presuppositions that absolute adjectives cannot. Suppose, for instance, that you are given two sticks of different lengths and are told to ‘pick out the long one’. No matter the lengths of the sticks, you will pick out the longer one as the long one. If, however, you are given two disks spotted with a different number of dots, and you are told to ‘pick out the spotted one’, you will be at a loss as to which disk to choose. In fact, you can only make this choice when one of the disks is completely unspotted. The fact that we can shift the comparison class depending on the context so that one stick will always be the long one, but we cannot do in the case of the spotted disks, tells us that ‘long’ is best classified as relative and ‘spotted’ as absolute.

Liao and Meskin applied the same procedure to aesthetic adjectives in a series of studies that varied in the particular aesthetic adjective tested and the stimuli used. Here is a particular example of how the studies went. In the first phase, participants were presented with pictures of two abstract sculptures and asked to pick out the beautiful one. Participants were given four options:

- Object A is the beautiful object.
- Object B is the beautiful object.
- I can't choose. Neither Object A nor Object B is beautiful.
- I can't choose. Both Object A and Object B are beautiful.

In the second phase, participants were presented again with the pictures of the two abstract sculptures and asked to make a comparative judgment by choosing from four options:

- Object A is more beautiful than Object B.
- Object B is more beautiful than Object A.
- Neither object is beautiful.
- Both objects are equally beautiful.

The answers obtained in the second phase were used to filter out participants who simply found the two objects equally beautiful, incomparable, or to be failing minimal standards of beauty. Thus, only participants who thought one object was more beautiful than the other remained. Their answers from the first phase were then used to determine whether they used the term 'beautiful' like a relative adjective (in which case they would choose one object as the most beautiful or the beautiful one) or like an absolute adjective (in which case they be unable to choose).

No matter which aesthetic adjectives were used, results were consistent: although standardly gradable, aesthetic adjectives differ from both relative gradable adjectives *and* absolute gradable adjectives in important respects. Indeed, whereas almost all participants accepted to choose an object when presented with a control absolute gradable adjective and almost none of them accepted to do so when presented with a control relative gradable adjective, around half accepted to make a choice when presented with an aesthetic adjective. That is, aesthetic adjectives produced a pattern of response that is intermediate between relative and absolute gradable adjectives. The puzzling linguistic properties of aesthetic adjectives can be seen using other formal and experimental linguistic diagnostics (Liao, McNally, and Meskin in press). Clearly, more work at the intersection of experimental philosophy of aesthetics and empirical linguistics is needed to truly understand the linguistic nature of aesthetics concepts as they are employed in aesthetic communication.

On the philosophy of mind side, aestheticians have traditionally been interested in the application conditions of particularly important aesthetic concepts, such as ART. For example, Richard Kamber (2011) investigated the concept of art by asking both laypeople and 'expert' participants whether they would classify certain object as works of art, and compared the results to major theories of art in the philosophical literature. Probably, the first paper to use the expression 'experimental philosophy of art', it represents an early effort to conduct philosophically motivated research on one, and perhaps the most important, aesthetic concept. So far, it is unique in its laudable attempt at using 'expert' participants who are in or closer to the artworld than regular people.

For another example, in a project in progress, Shen-yi Liao, Aaron Meskin, and Joshua Knobe (2015) are investigating the structure of aesthetic concepts such as ART and LITERATURE. Liao and colleagues are building their investigation on existing works done on dual character concepts. Dual character concepts are concepts the application of which involves evaluations with respect to two different sets of criteria: (i) a set of concrete features or (ii) the aims and ideals that these features serve to realize (Knobe, Prasada, and Newman 2013). For example, the concept SCIENTIST might apply to a person in one sense, when the person instantiates the relevant concrete features (e.g. being employed by a university, working in a team on experimental research), but also fail to apply to the same person in another sense, when the person fails to embody the relevant aims and ideals

(e.g. not caring about the search for empirical knowledge, fudging data to achieve success). Thus, one can be a scientist in the first sense while failing to be a 'true' scientist in the second sense (this is line with Machery's proposal on the nature of concepts; see Machery 2009). With a series of studies, Liao and colleagues have shown that the application of many important art concepts, such as ART and LITERATURE, involves both considerations about concrete features and considerations about the aims and ideals associated with these concepts. For example, most participants say that a novel can count as LITERATURE in one sense (e.g. it has the concrete feature of being published by a prestigious publisher) but not in the other (e.g. it fails to realize relevant aims and ideals). This structure of many important art concepts, including ART, has not been recognized in the philosophical literature on the concepts of ART and LITERATURE. In turn, having a better understanding of the conceptual structure of many important art concepts may help us make progress on first-order debates about them, such as the ongoing debate about defining art.

2.4. IMAGINATION

As mentioned earlier, it is widely accepted that imagination plays a central role in our engagement with the arts. In particular, imagination's role in engaging with narrative artworks, especially literary fictions and films, is more obviously assessable via empirical research.

There is a rich tradition of psychologists discussing imagination's role in engaging with fictions (Liao and Gendler 2011). They often note that understanding the contours of imaginative activities can help us better understand people's aesthetic experiences (e.g. Weisberg 2014). Psychologists have investigated topics such as imagination's role in the construction of fictional worlds (e.g. Woolley and Cox 2007; Weisberg and Goodstein, 2009; Weisberg and Sobel 2012), in 'transportation' into the fictional worlds of stories (Gerrig, 1993; Green and Brock, 2000), and the function of fiction in social cognition (e.g. Mar and Oatley 2008). As mentioned, these results have received some uptake in philosophical aesthetics.

For their first attempt at experimentally contributing to this literature, philosophers teamed up with psychologists to investigate imaginative resistance. Imaginative resistance, roughly put, occurs when an otherwise competent imaginer finds it difficult to engage in a prompted imaginative activity, most notably when one is asked to imagine a fictional world that differs from the real world along moral dimensions (see Liao and Gendler in press and Miyazono and Liao in press for overviews). Initial contemporary discussions of the phenomenon (e.g. Walton 1994; Gendler 2000; Weatherson 2004) relied on philosophers' introspection. However, philosophers and psychologists are now using empirical methods to pinpoint the phenomenon and explicate the factors that underlie the imaginative difficulties.

While some of the earlier works remain unpublished (Brock 2008; Levine 2009), Shen-yi Liao, Nina Strohminger, and Chandra Sripada (2014) have recently published a paper in which they argue that ordinary people do experience imaginative resistance in responding to morally deviant prompts, but that their resistance is modulated by their genre expectations. In one study, participants were presented with two fictional stories that shared many surface similarities (they both featured a child being sacrificed for religious reasons) but differed in genre (one story was presented as an excerpt from a police procedural, while the other was presented as an Aztec myth). Participants were then asked whether it was true in the fiction that the protagonist did the right thing by committing an infanticide. The results showed that participants were far more willing to say that the moral proposition was fictionally true in the Aztec myth case than in a police procedural case. Hence, while people do seem to experience imaginative difficulties with morally deviant propositions, such imaginative difficulties also seem to be moderated by genre.

Following on from the theoretical and empirical works done by philosophers, psychologists Jessica Black and Jennifer Barnes (2015) are now investigating the relationship between imaginative

resistance and individual traits and have constructed a scale to measure the experience of imaginative resistance.

3. *Relevant Works in Other Academic Disciplines: The Case of Emotions*

So far, we have surveyed experimental work accomplished by philosophers with the direct aim of tackling traditional philosophical questions. However, empirical methods relevant to such inquiries can be found in other disciplines. Here, we give an example of such researches by focusing on the role of emotions in aesthetic appreciation.

That emotions play a role in aesthetic appreciation is nothing new and has been emphasized by recent research in neuroaesthetics (Cinzia & Vittorio 2009; Kuchinke et al. 2009). However, there has been little research on which specific emotions arise during aesthetic appreciation, and on their respective role in shaping aesthetic judgments. Nevertheless, following the wealth of research on the relationship between emotions and moral judgments, psychologists are now turning to the study of their relationship with aesthetic judgments. For example, taking as their starting point Burke's contention that fear is a constitutive part of the feeling of sublime (Burke 2008), Eskine and his colleagues investigated the effect of inducing fear on judgments of sublime (Eskine, Kacirik and Prinz 2012). Compared to participants asked to perform jumping jacks (to control for physiological arousal) or presented with a joyful video, participants first presented with a scary video were more likely to judge paintings as sublime. This suggests not only that fear might play a role in aesthetic appreciation but that not all emotions play the same role, calling for a more discrete and fine-grained approach of their role in aesthetic appreciation. Similarly, unpublished research by Kevin Tobia (2015) shows that inducing wonder by making some information about an object (such as its original use) unknown led people to attribute higher aesthetic and economic value to this object, thus suggesting that the understudied emotion of wonder could also play a role in aesthetic appreciation.

In the same vein, interesting results bearing on the famous 'paradox of tragedy' can be drawn from the field of communication studies, in which a similar problem has been discussed under the name of the 'sad films paradox' (Oliver 1993): How is it that people enjoy watching sad films and, more problematically, how is it that their enjoyment correlates with the sadness they experience? One solution that has been empirically investigated distinguishes between two kinds of enjoyment: *hedonic* enjoyment (based on pleasure-seeking) and *eudaimonic* enjoyment (based on the search of meaningfulness) (Oliver & Raney 2011). Indeed, empirical research revealed that people with a preference for sad films were also more likely to prefer eudaimonic to hedonic enjoyment, suggesting that sad films attract by their capacity to feature deep and important matters about human life.

However, this does not mean that our enjoyment of sad films has nothing to do with emotions. Indeed, certain emotions seem to be preferentially triggered by the contemplation of such 'profound' matters. For example, the emotion of 'being moved' has been hypothesized to be a pleasant emotion triggered by powerful instantiation of values that are important to us (Cova and Deonna 2014) and inducing it leads participants to judge a narrative as more real and credible (Strick et al. in press) as well as thinking more about what really matters to them (Cova, Deonna, and Sander 2015). Thus, it might be that the element that drives the enjoyment of sad films is their ability to elicit the pleasant feeling of being moved, a feeling that in turns leads us to judge them to be 'profound'. In support of this hypothesis, a recent study by Hanich and colleagues (2014) had participants watch sad excerpts from movies and rate (i) how much they enjoyed these excerpts; (ii) how much sadness they experienced; and (iii) to which extent they felt moved. Results showed not only that enjoyment of sad movies was strongly predicted by the feeling of being moved but also that, once controlled for the feeling of being moved, the relationship between sadness

elicited by films and participants' enjoyment disappeared. This suggests that sadness itself is not enjoyable, only the feeling of being moved is (see also Oliver, Hartmann and Woolley 2012).

Like the paradox of tragedy, many paradoxes about our engagement with fictions are what Carroll calls 'paradoxes of the heart' and have to do with emotional reactions to fictions (Carroll, 1990). Thus, empirical investigations of how emotions shape our appreciation of works of art are likely to help us making progress on related questions such as the 'paradox of horror'. However, not all paradoxes are about the role emotions play in aesthetic appreciation. Others, such as the 'paradox of fiction' (Radford and Weston 1975) and the 'paradox of suspense' (Yanal 1996), are about the very nature of emotions we experience in response to fiction. Such questions are also likely to benefit from the methods and results of emotion psychology and affective neuroscience. For example, motivated by Currie and Walton's claim that affective reactions to fictions differ in nature from everyday emotions (Currie, 1990; Walton, 1990), Sennwald and colleagues (2015) have recently compared participants' reactions to the very same videos and texts presented either as documentaries or as fictions. They found that people reported less intense negative affects when these stimuli were presented as fictions, and these reports were corroborated by skin conductance measures in the case of videos. This suggests that there are substantive differences between emotions towards real and fictional characters. Similarly, recent psychological and neuroscientific research on the nature of suspense have been guided by the philosophical literature on the paradox of suspense (Lehne and Koelsch, 2015), and it is likely that its results will in return bear on those philosophical issues.

4. Concluding Remarks

As shown in this paper, experimental philosophy of aesthetics is a thriving area. We can only expect more works to develop in the coming years, and we hope that these works will make good use of the empirical methods and resources developed in other disciplines. Although we focused here on psychology and linguistics, given the proximity between such areas and past works in experimental philosophy, one should not overlook the benefits that can be drawn from other disciplines. For example, sociology of art might be a source of inspiration for those willing to operationalize notions such as the 'artworld'. Discussions about the epistemology of aesthetic properties might also benefit from methods similar to those used to measure the reliability of wine tasters to determine if there is anything like aesthetic expertise.

Overall, the rise of an experimental philosophy of aesthetics should not interest only to those concerned with aesthetics but also all others already concerned with experimental philosophy and its place in the philosophical landscape: by resolutely shifting focus from intuitions to experiences and practices, experimental philosophy of aesthetics might contribute to broadening the methods and purpose of experimental philosophy.

Short Biographies

Florian Cova is a postdoctoral researcher at the Swiss Centre in Affective Sciences and main investigator in the project "Towards an experimental philosophy of aesthetics", funded by the Cogito Foundation. Aside from aesthetics, his main interests are experimental philosophy and moral psychology, and he has published these topics in journals such as *Consciousness and Cognition* (on intuitions about free will), *Ethical Theory and Moral Practice* (on moral responsibility) and *Mind and Language* (on intentional action).

Amanda Garcia, after completing a thesis on fiction and imagination at the University of Geneva in 2012, became a post-doctoral researcher at the Swiss Centre for Affective Sciences

and participated in the interdisciplinary project ‘The Impact of Fiction on Evaluative Attitudes’. She is currently working in due diligence and publishing while continuing her philosophical research on the nature of traditional and interactive fiction, in addition to the paradox of emotions and fiction.

Shen-yi Liao is Assistant Professor of Philosophy at University of Puget Sound and Marie Curie International Incoming Fellow (PIIF-GA-2012-328977) at University of Leeds, working on the project “Experimental Philosophical Aesthetics and Human Nature”. His research projects span cognitive science, philosophy of mind, aesthetics and moral psychology, and he has published in journals such as *The Journal of Philosophy*, *Philosophy and Phenomenological Review*, *The Philosophical Quarterly* and *British Journal of Aesthetics*. His publications are available on his website: liao.shen-yi.org.

Note

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Works Cited

- Alexander, J. and J. M. Weinberg. ‘Analytic Epistemology and Experimental Philosophy.’ *Philosophy Compass* 2 (2007): 56–80.
- Beebe, J. R. and D. Sackris. ‘Moral Objectivism Across the Lifespan.’ Unpublished Manuscript, University of Buffalo, 2010.
- Black, J. and J. Barnes. ‘I can’t Even Imagine: Empirical Evidence of Imaginative Resistance.’ Unpublished manuscript, University of Oklahoma, 2015.
- Brock, S. ‘The Puzzle of Fictional Morality.’ Unpublished manuscript, University of Victoria, 2008.
- Brown, S. and E. Dissanayake. The Arts are More Than Aesthetics: Neuroaesthetics as Narrow Aesthetics. *Neuroaesthetics*. Eds. M. Skov, and O. Vartanian, Amityville, NY: Baywood, 2009.
- Bullot, N. J. and R. Reber. ‘The Artful Mind Meets art History: Toward a Psycho-Historical Framework for the Science of art Appreciation.’ *Behavioral and Brain Sciences* 36 (2013): 123–137.
- Burke, E. *A Philosophical Inquiry into the Origin of our Ideas of the Sublime and Beautiful*. New York, NY: Oxford University Press, 2008. (Original work published 1757)
- Carroll, N. *The Philosophy of Horror: Or, Paradoxes of the Heart*. New York: Routledge, 1990.
- Chatterjee, A. ‘Neuroaesthetics: A Coming of Age Story.’ *Journal of Cognitive Neuroscience*, 23 (2011): 53–62.
- Cinzia, D. D. and G. Vittorio. ‘Neuroaesthetics: A Review.’ *Current Opinion in Neurobiology* 19 (2009): 682–687.
- Cova, F. Qu’est-ce que la philosophie expérimentale. *La Philosophie Expérimentale*. Eds. Cova, F., J. Dutant, E. Machery, J. Knobe, S. Nichols and E. Nahmias. Paris: Vuibert, 2012.
- Cova, F. and J. A. Deonna. ‘Being Moved.’ *Philosophical Studies*, 169 (2014): 447–466.
- Cova, F. and K. Goffin. ‘Guilty Pleasures and Aesthetic Normativity.’ Unpublished manuscript, University of Geneva, 2015.
- Cova, F. and N. Pain. ‘Can Folk Aesthetics Ground Aesthetic Realism?’ *The Monist* 95 (2012): 241–263.
- Cova, F., J. A. Deonna and D. Sander. ‘Is Elevation a way of Being Moved?’ Unpublished manuscript. University of Geneva, 2015.
- Currie, G. *The Nature of Fiction*. Cambridge, UK: Cambridge University Press, 1990.
- Image and Mind: Film, Philosophy, and Cognitive Science. Cambridge: Cambridge University Press, 2008.
- Currie, G. and I. Ravescroft. *Recreative Minds: Imagination in Philosophy and Psychology*. Oxford: Oxford University Press, 2002.
- Currie, G., M. Kieran, A. Meskin and J. Robson. *Aesthetics and the Sciences of Mind*. Oxford: Oxford University Press, 2014.
- Cutting, J. E. ‘Gustave Caillebotte, French Impressionism, and Mere Exposure.’ *Psychonomic Bulletin & Review* 10 (2003): 319–343.
- Eskine, K. J., N. A. Kacirik and J. J. Prinz. ‘Stirring Images: Fear, not Happiness or Arousal, Makes Art More Sublime.’ *Emotion* 12 (2012): 1071–1074.
- Fechner, G. T. *Vorschule der Ästhetik*. Leipzig: Breitkopf & Härtel, Leipzig 1876.
- Friend, S. Believing in Stories. *Aesthetics and the Sciences of Mind*. Eds. Currie, G., M. Kieran, A. Meskin and J. Robson, Oxford: Oxford University Press, 2014.
- Gerrig, R. *Experiencing Narrative Worlds: On the Psychological Activities of Reading*, New Haven, CT: Yale University Press, 1993.
- Goodwin, G. and J. Darley. ‘The Psychology of Meta-Ethics: Exploring Objectivism.’ *Cognition* 106 (2008): 1339–66.
- Green, M. C. and T. C. Brock. ‘The Role of Transportation in the Persuasiveness of Public Narrative.’ *Journal of Personality and Social Psychology* 79 (2000): 701–721.
- Hanich, J., V. Wagner, M. Shah, T. Jacobsen and W. Menninghaus. ‘Why we Like to Watch Sad Films. The Pleasure of Being Moved in Aesthetic Experiences.’ *Psychology of Aesthetics, Creativity, and the Arts* 8 (2014): 130–143.

- Harris, P. *The Work of Imagination*. Malden: Blackwell Publishing, 2000.
- Hyman, J. Art and Neuroscience. *Beyond Mimesis and Convention, Boston Studies in the Philosophy of Science*. Eds. Frigg, R. and M. C. Hunter. Springer, 2010. 262.
- Kamber, R. 'Experimental Philosophy of Art.' *The Journal of Aesthetics and Art Criticism* 69 (2011): 197–208.
- Kant, I. *Critique of Judgment*. Oxford: Oxford University Press, 1928. (Original work published 1790)
- Kennedy, C., L. McNally, D. Graff and B. Levin. 'Scale Structure and the Semantic Typology of Gradable Predicates.' *Language* 81 (2005): 345–381.
- Knobe, J. 'Experimental Philosophy.' *Philosophy Compass* 2 (2007): 81–92.
- Knobe, J. and S. Nichols. An Experimental Philosophy Manifesto. *Experimental Philosophy*. Eds. Knobe, J. and S. Nichols. Oxford: Oxford University Press, 2008
- Knobe, J., S. Prasada and G. Newman. 'Dual Character Concepts and the Normative Dimension of Conceptual Representation.' *Cognition* 127 (2013): 242–257.
- Kuchinke, L., S. Trapp, A. M. Jacobs and H. Leder. 'Pupillary Responses in Art Appreciation: Effects of Aesthetic Emotions.' *Psychology of Aesthetics, Creativity, and the Arts* 3 (2009): 156–163.
- Lehne, M. and S. Koelsch. 'Towards a General Psychological Model of Tension and Suspense.' *Frontiers in Psychology* 6 (2015): 79.
- Levine, S. *An Experimental Philosophy Approach to Imaginative Resistance*. BA Thesis: Yale University, 2009
- Liao, S. and T. S. Gendler. 'Pretense and Imagination.' *Wiley Interdisciplinary Reviews: Cognitive Science* 2 (2011): 79–94.
- Liao, S. and T. S. Gendler. 'The Problem of Imaginative Resistance.' *The Routledge Companion to Philosophy of Literature*. Eds. Gibson J. and N. Carroll. New York: Routledge, in press.
- Liao, S. and A. Meskin. 'Aesthetic Adjectives: Experimental Semantics and Context-Sensitivity.' *Philosophy and Phenomenological Research* in press.
- Liao, S., L. McNally and A. Meskin. 'Aesthetic Adjectives Lack Uniform Behavior.' *Inquiry* in press.
- Liao, S., A. Meskin and J. Knobe. 'Dual Character Art Concepts'. Unpublished manuscript, University of Leeds and Yale University, 2015.
- Liao, S., N. Strohminger and C. S. Sripada. 'Empirically Investigating Imaginative Resistance.' *British Journal of Aesthetics* 54 (2014): 339–355.
- Leiter, B. 'What Areas are Most Important for a Strong PhD Program?' *Leiter Reports: A Philosophy Blog* 2012. Last retrieved on 01/24/2015 from <http://leiterreports.typepad.com/blog/2012/07/what-areas-are-most-important-for-a-strong-phd-program.html>
- Livingstone, M. *Vision and Art*. New York: Harry N. Abrams, 2002.
- Lopes, D. 'Pictorial Color: Aesthetics and Cognitive Science.' *Journal of Consciousness Studies* 12 (1999): 415–28.
- 'Pictures and the Representational Mind.' *The Monist* 86 (2003): 632–52.
- Machery, E. *Doing Without Concepts*. New York: Oxford University Press, 2009.
- Mar, R. A. and K. Oatley. 'The Function of Fiction is the Abstraction and Simulation of Social Experience.' *Perspectives on Psychological Science* 3 (2008): 173–192.
- Matravers, D. *Fiction and Narrative*. Oxford: Oxford University Press, 2014.
- Meskin, A., M. Phelan, M. Moore and M. Kieran. 'Mere Exposure to Bad Art.' *British Journal of Aesthetics* 53 (2013): 139–164.
- Meskin, A., S. Liao and J. Andow. 'Aesthetic Testimony: Some Empirical Evidence.' Unpublished manuscript, University of Leeds, 2015.
- Miyazono, K. and S. Liao. 'The Cognitive Architecture of Imaginative Resistance.' *The Routledge Handbook of Philosophy of Imagination*. Ed. Amy Kind. New York: Routledge, in press.
- Nadelhoffer, T. and E. Nahmias. 'The Past and Future of Experimental Philosophy.' *Philosophical Explorations* 10 (2007): 123–149.
- Newman, G. E. and P. Bloom. 'Art and Authenticity: The Importance of Originals in Judgments of Value.' *Journal of Experimental Psychology: General* 141 (2012): 558–569.
- . 'Physical Contact Influences How Much People Pay at Celebrity Auctions.' *Proceedings of the National Academy of Sciences* 111 (2014): 3705–3708.
- Newman, G. E., D. M. Bartels and R. K. Smith. 'Are Artworks More Like People Than Artifacts? Individual Concepts and Their Extensions.' *Topics in Cognitive Science* 6 (2014): 647–662.
- Nichols, S. and T. Folds-Bennett. 'Are Children Moral Objectivists? Children's Judgments About Moral and Response-Dependent Properties.' *Cognition* 90 (2003): B23–B32.
- Nichols, S. and S. Stich. 'A Cognitive Theory of Pretense.' *Cognition* 74 (2006): 115–147.
- Oliver, M. B. 'Exploring the Paradox of the Enjoyment of Sad Films.' *Human Communication Research* 19 (1993): 315–342.
- Oliver, M. B. and A. A. Raney. 'Entertainment as Pleasurable and Meaningful: Identifying Hedonic and Eudaimonic Motivations for Entertainment Consumption.' *Journal of Communication* 61 (2011): 984–1004.

- Oliver, M. B., T. Hartmann and J. K. Woolley. 'Elevation in Response to Entertainment Portrayals of Moral Virtue.' *Human Communication Research* 38 (2012): 360–378.
- O'Neill, E. and E. Machery. *Experimental Philosophy: What is it Good for?* *Current Controversies in Experimental Philosophy*. Eds. Machery E. and O'Neill, E.. Routledge, 2014.
- Prinz, J. *Empirical Philosophy and Experimental Philosophy*. *Experimental Philosophy*. Eds. Knobe J. and S. Nichols. Oxford University Press, 2008.
- Radford, C. and M. Weston. 'How Can We Be Moved by the Fate of Anna Karenina?' *Proceedings of the Aristotelian Society. Supplementary Volumes* 49 (1975): 67–93.
- Ramachandran, V.S. and W. Hirstein. 'The Science of Art: A Neurological Theory of Aesthetic Experience.' *Journal of Consciousness Studies* 6 (1999): 15–57.
- Réhault, S. *La Beauté des Choses*. Rennes: Presses Universitaires de Rennes, 2013.
- Rollins, M. 'Pictorial Representation: When Cognitive Science Meets Aesthetics.' *Journal of Consciousness Studies* 12 (1999): 387–413.
- Rose, D. and D. Danks. 'In Defense of a Broad Conception of Experimental Philosophy.' *Metaphilosophy* 44 (2013): 512–532.
- Schellekens, E. and P. Goldie. *The Aesthetic Mind: Philosophy and Psychology*. Oxford: Oxford University Press, 2011.
- Sennwald, V., F. Cova, A. Garcia, P. Lombardo, S. Schwartz, F. Teroni, J. Deonna and D. Sander. 'Is What I'm Feeling Real?' Unpublished manuscript, University of Geneva, 2015.
- Smith, R. K. and G. E. Newman, G. E. 'When Multiple Creators Are Worse Than One: The Bias Toward Single Authors in the Evaluation of Art.' *Psychology of Aesthetics, Creativity, and the Arts* 8 (2014): 303–310.
- Sommers, T. 'Experimental Philosophy and Free Will.' *Philosophy Compass* 5 (2010): 199–212.
- Stokes, D. 'Aesthetics and Cognitive Science.' *Philosophy Compass* 4 (2009): 715–733.
- Strick, M., H. L. de Bruin, L. C. de Ruiter and W. Jonkers. 'Striking the Right Chord: Moving Music Increases Psychological Transportation and Behavioral Intentions.' *Journal of Psychology: Applied* in press.
- Tobia, K. 'The Less you Know, the More it Matters: The Unknown, Wonder, and Value.' Unpublished manuscript, Yale University, 2015.
- Tullmann, K. and W. Buckwalter. 'Does the Paradox of Fiction Exist?' *Erkenntnis* 79 (2014): 779–796.
- Walton, K. L. *Mimesis as Make-Believe: On the Foundations of the Representational Arts*. Cambridge, MA: Harvard University Press, 1990.
- . 'Morals in Fiction and Fictional Morality (I).' *Supplement to the Proceedings of the Aristotelian Society* 68 (1994): 27–50.
- . 'Aesthetics—What? Why? and Wherefore?' *The Journal of Aesthetics and Art Criticism* 65 (2007): 147–161.
- Weatherston, B. 'Morality, Fiction, and Possibility.' *Philosopher's Imprint* 4 (2004): 1–27.
- Weinberg, J. M. and A. Meskin. *Imagine That. Contemporary Debates in Aesthetics and the Philosophy of Art*. Ed. Kieran, M. New York: Blackwell, 2005.
- . *Puzzling Over the Imagination: Philosophical Problems, Architectural Solutions*. Ed. Nichols, S., *The Architecture of the Imagination: New Essays on Pretence, Possibility, and Fiction*. Oxford: Clarendon, 2006.
- Weisberg, D. S. 'The Development of Imaginative Cognition.' *Royal Institute of Philosophy Supplement* 75 (2014): 85–103.
- Weisberg, D. S. and J. Goodstein. 'What Belongs in a Fictional World?' *Journal of Cognition and Culture* 9 (2009): 69–78.
- Weisberg, D. S. and D. M. Sobel. 'Young Children Discriminate Improbably from Impossible Events in Fiction.' *Cognitive Development* 27 (2012): 90–98.
- Wolff, C. *Psychologia Empirica*. *Christian Wolff's Gesammelte Werke, II*. Ed. École, J., Abteilung [Christian Wolff's Collected Works, Section II] (Band 5). Hildesheim: Olms, 1964. (Original work published 1732)
- Woolley, J. D. and V. Cox. 'Development of Beliefs About Storybook Reality.' *Developmental Science* 10 (2007): 681–693.
- Yanal, R. J. 'The Paradox of Suspense.' *The British Journal of Aesthetics* 36 (1996): 146–158.
- Zajonc, R. B. 'Attitudinal Effects of Mere Exposure.' *Journal of Personality and Social Psychology Monograph Supplement* 9 (1968): 1–27.
- Zangwill, N. *The Metaphysics of Beauty*. NY: Cornell University Press, 2001.
- Zeki, S. *Inner Vision: An Exploration of Art and the Brain*. Cambridge, MA: Blackwell, 1999.