

Motoric Understanding and Aesthetic Appreciation

Gabriele Ferretti

Ruhr-University Bochum, Germany

Abstract Standard philosophical studies on picture perception usually investigated the peculiar nature of pictorial experience and the way aesthetic appreciation can be generated during this experience. Recently, however, the philosophical literature has also focused on a new aspect of picture perception: the possible involvement that the visual states related to action processing may actually play in pictorial experience. But this role has been studied only in relation to the understanding of the nature of pictorial experience, qua visual experience. This paper offers some preliminar speculation, which may guide future research, on the role of action in aesthetic appreciation of pictures.

Keywords Action. Vision. Picture perception. Aesthetic appreciation. Visual neuroscience.

Summary 1 Introduction. – 2 Aesthetic Appreciation of Pictures. – 3 Action and Ordinary Pictorial Experience. – 4 Motoric Aesthetic Appreciation. – 5 Conclusion.



Edizioni
Ca' Foscari

Peer review

Submitted	2021-03-03
Accepted	2021-05-17
Published	2021-06-30

Open access

© 2021 | Creative Commons Attribution 4.0 International Public License



Citation Ferretti, G. (2021). "Motoric Understanding and Aesthetic Appreciation". *JoLMA. The Journal for the Philosophy of Language, Mind and the Arts*, 2(1), 113-130.

DOI 10.30687/JoLma/2723-9640/2021/01/007

1 Introduction

The main aim of the investigation in the philosophical literature on picture perception is twofold. On the one hand, a big effort has been devoted to the understanding of the nature of pictorial experience, which is taken to be a special kind of visual experience. On the other, philosophers have also investigated the way aesthetic appreciation can be generated during pictorial experience.

Recently, the philosophical literature has also focused on a new and usually neglected aspect of picture perception: the possible role that the visual states related to action processing may actually play in generating correct pictorial experience. That said, this role has been studied only in relation to the former of the previous investigations, namely, the one related to the understanding of the nature of pictorial experience, *qua* visual experience.

This paper wants to focus on the potential role of action for what concerns the second investigation, and explore the possible routes related to the following speculation, which grounds on the idea of an alleged role for action in aesthetic appreciation: that the visual states related to action processing may also play a role in allowing the spectator to enter aesthetic appreciation. The paper proposes, thus, a *manifesto* of this neglected role (within the philosophical literature), and the possible ways of spelling out this role. This manifesto is based on recent empirical evidence from neuroaesthetics, the field of neuroscience involved in the study of aesthetic appreciation.

The idea is, then, that not only are these states crucial in our best explanation of how pictorial experience, in quality of a peculiar visual experience, can be actually reached, or is correctly generated. They may also be crucial, in principle, for the way pictures are a source of aesthetic appreciation.

The main reason for such a speculation is the following. The philosophical literature has suggested that an important perceptual aspect of aesthetic appreciation is given by the fact that the viewer visually represents the surface as the vehicle, or the bearer, of the marks from which the pictorial space emerges, i.e. of the pictorial content.

Then, the speculation of the present paper is drawn on the basis of the evidence that it is possible for the spectator to represent the gesture related to the action that the artist has performed in order to realize the marks on the surface that generate the pictorial space.

The core idea is, then, that this representation may lead the viewer to perceive how, due to the motor expertise of the artist, the marks are realized on, and emerge from, the surface upon which the pictorial object is encoded. The paper speculates that, since part of aesthetic appreciation is taken to depend on recognizing that the pictorial space emerges from a surface, this could be an important perceptual-motor aspect at the basis of the aesthetic appreciation of a pictorial

content. If so, the paper suggests, then this idea, coming from experimental results, is a very significant source of evidence that should be more analysed by philosophers interested in aesthetic appreciation.

The paper proceeds as follows. I first describe the standard story on aesthetic appreciation of pictures, starting from usual accounts of the peculiar nature of pictorial experience (§ 2). Then, I discuss what has been recently described as the crucial role of the visual states related to action processing in generating pictorial experience (§ 3). Then, I suggest that the visual states related to action processing are not only crucial when it comes to the generation of appropriate pictorial experience, but can also play a role in aesthetic appreciation of pictorial objects (§ 4). Then, I offer concluding remarks on the speculation presented in this paper (§ 5).

2 Aesthetic Appreciation of Pictures

Contemporary accounts of picture perception are interested in understanding which kind of perceptual state we are in when in front of a picture.

According to these accounts, during picture perception we see two important aspects of the perceptual object: the depicted object, i.e. what is usually defined the pictorial content, and the picture's surface, i.e. the vehicle of the pictorial content (Wollheim 1980; Nanay 2011; 2015a; 2016; 2017). And several arguments have been proposed to suggest that we visually represent them simultaneously.¹ On the one hand, simultaneous representation is needed as, in order to appreciate a pictorial content, we must, of course, visually represent the pictorial space. But in order to do so, we must also correctly visually represent (in general) the surface (a notion that is not trivial).² Indeed, when this is not possible, we fall into the illusion of presence of the depicted object, as in the case of *trompe l'oeils* illusory paintings (Ferretti 2020a; 2020c; 2021b).

However, visual representations can be either conscious or unconscious. In this respect, it has been proposed that while we must visually represent both the surface and the depicted object simultaneously, we cannot consciously visually represent both of them, or we would enter an odd visual experience.³ For this reason, it has been suggested that the best story on simultaneity is that we simultaneous-

¹ Nanay 2011; 2015a; 2017; Ferretti 2016c; 2017a; 2017b; 2018a; 2018b; 2019; 2020a; 2020c; 2021b; Ferretti, Marchi 2020.

² See Nanay 2017; Ferretti 2019; 2020a; 2021b; Ferretti, Marchi 2020.

³ I cannot focus on this point here, see Hopkins 2012; see also Nanay 2017; Ferretti 2020a; 2021b; Ferretti, Marchi 2020.

ly consciously see (or visually represent) the depicted object while unconsciously seeing (or visually representing) the surface.⁴ That means, *ipso facto*, that in order to consciously appreciate a pictorial content, we must visually represent, unconsciously, the surface (Ferretti 2021b).

But the literature on picture perception is not only interested in explaining how we can enter correct pictorial experience. Another desideratum is that of understanding what happens during aesthetic appreciation of pictures (for a recent review, see Nanay 2016; 2017; Ferretti, Marchi 2020).

In this framework, *aesthetic appreciation* seemed to be based on the fact that we can, at once, visually represent, consciously, both the depicted object and the surface. So, differently from cases of usual picture perception without aesthetic appreciation, in which we consciously see the surface while unconsciously seeing the depicted object, when we are aesthetically appreciating a picture, we are exercising our *conscious* vision on both the depicted object and the surface (for a recent review, see Nanay 2017).

However, as the reader can easily realize, this has been judged as a problematic claim: simultaneous consciousness of both the depicted object and the surface would lead to an odd visual experience (Ferretti, Marchi 2020). But aesthetic pictorial experience is not odd. How can we overcome this impasse? An analysis of the relations between visual consciousness and visual attention (which can be focal or distributed), and of the way they are at work when we are in front of a depicted object, has suggested that there is still a way for being committed to the claim that pictorial aesthetic appreciation requires simultaneous consciousness: in case of aesthetic appreciation, we consciously attend to both these two components of the picture, but our visual attention is distributed along the picture. This solves the problem of a potential odd pictorial experience during simultaneous consciousness, as distributed attention permits to avoid this problematic scenario (for technical details, see Ferretti, Marchi 2020).

This explanation is crucial because a peculiar perceptual feature of aesthetic appreciation of pictures seems to be that we can perceptually, consciously realize, how the pictorial content is nothing but what emerges from the marks visually detected upon the surface, which is the material bearer of the pictorial space and which is, indeed, visually recognized as such, i.e. as the vehicle of the pictorial object, during aesthetic appreciation.⁵

⁴ For a recent review of the positions on this claim see Ferretti 2020a; 2021b; Ferretti, Marchi 2020; see also Nanay 2011; 2015a; 2017.

⁵ For a complete review of this idea, usually related to the notion of *inflection*, or inflected *seeing-in*, see Nanay 2005; 2011; 2015a; 2016; 2017; Ferretti 2016a; 2016b; 2017a;

That said, however, this notion has been one of the most debated, for different reasons, in the literature on picture perception.⁶

This is not the venue to discuss this debate. Here, I will simply maintain the basic idea that an important representational component of aesthetic appreciation of pictures is that the surface is visually represented as the bearer of the pictorial content (as recently discussed, Nanay 2017; Ferretti, Marchi 2020).

In this respect, in this paper, I will assume the following notions. That during usual picture perception we do not need to visually represent the vehicle as such. We just need that our visual system tracks the presence of the surface – otherwise we'd enter the illusion of presence of the pictorial object (Ferretti 2018a; 2018b; 2019; 2020a; 2021b) (cf. § 3). Indeed, we do not need to consciously visually represent the surface as the bearer of the pictorial content. Conversely, this seems to be crucial for aesthetic appreciation, in which not only do we need to visually track the presence of the surface, this being responsible for allowing us to enter proper pictorial experience (Ferretti 2016b; 2018; 2020a; 2021b), but also to consciously attend to the surface as such, the design as design, that is, to recognize it as the vehicle of the pictorial content, a surface from which the marks can be visually encoded as being at the basis of the pictorial space (Nanay 2017; Ferretti, Marchi 2020).

So far so good. Now, it has been recently suggested that also action plays a crucial role in order for the subject in front of the picture to reach a proper pictorial experience (Ferretti 2021b). I will discuss this notion in the next section. This will be an interesting starting point for the manifesto offered in this paper, as it will permit to suggest that action can be crucial also in order for a spectator to reach *aesthetic pictorial* appreciation. The reader may understand how this follows from a simple line of reasoning.

If action is needed to achieve correct pictorial experience, then we might speculate that it could also have a somewhat role in reaching a peculiar form of pictorial experience: *aesthetic pictorial* appreciation. And if *aesthetic pictorial* appreciation is based upon the idea that the spectator can visually represent both the surface and the depicted object, as to visually represent the former as the bearer of the latter, then, there is room to suppose that action can play a somewhat role in the visual representation of the surface as the bearer of the pictorial content. How? Part of the aesthetic appreciation may be given by the fact that the spectator realizes that the pic-

2017b; 2018a; 2018b; 2019; Ferretti, Marchi 2020; Hopkins 2010; 2012; Kulvicki 2006; Lopes 2005; Voltolini 2013.

⁶ Nanay 2010; 2011; 2015a; 2016; 2017; Lopes 2005; Hopkins 2010; Voltolini 2013; Ferretti 2016c; 2018; Kulvicki 2006.

torial space is something emerging from the marks of the depicted surface, a depiction that has been realized by means of specific motor acts of the painter. The visual representation of these motor acts might be, or so the speculation guiding this manifesto goes, (at least partially) responsible for the aesthetic appreciation of the pictorial content as the result of a sort of human *poietic* expertise.

Before moving on to an examination of this new claim within the philosophical literature, based on the focus on recent empirical evidence from neuroaesthetics, I need to say something on the relation between action and usual pictorial experience.

3 Action and Ordinary Pictorial Experience

The role of the visual states related to action in pictorial experience has been hugely neglected in the previous literature up to now and only recently analysed (Ferretti 2021b). Two ideas have been proposed.

First, in order to enter ordinary pictorial experience, that is, an experience of a pictorial object confined within the pictorial space, our visual system must represent the presence of a surface, that is, of an object we can interact with, and this representation allows us to avoid having the impression of the presence for motoric interactivity with the objects in the pictorial space. This means that what is called *vision-for-action* has to be properly attuned to the surface (Ferretti 2021b). When it is not the case, we enter illusions such as those encountered during *trompe l'oeil* experience, in which the pictorial object looks like a present object offering motor interaction (Ferretti 2016c; 2018b; 2020a). In these cases, we have what is called a breakdown of usual pictorial experience and its typical visual characteristics (Ferretti 2021b).

Second, with pictorial objects we do not visually experience spatial shifts as we move with respect to them, and this happens because our visual system compensates for the pictorial space, as it is attuned to the spatial shifts offered by the surface, whose presence is correctly tracked, as soon as we move. This means that what is called *sensorimotor understanding* has to be properly attuned to the surface (Ferretti 2021b). When we cannot track the surface successfully, our visual system will be capable of deriving spatial shifts with respect to the pictorial space, as it happens with *anamorphic* paintings and *trompe l'oeils* (Ferretti 2020b). Even in these cases, we have a partial or complete breakdown of usual pictorial experience and its typical visual characteristics (Ferretti 2021b).

Therefore, it has been suggested, action plays a significant role in generating proper pictorial experience, as when these visual processes related to action are not correctly in play (upon the surface), we cannot reach a correct pictorial experience (i.e., an experience of

what should be represented as a pictorial space) and enter the illusion of being in front of a present object, offering several spatial, motor and action cues that are not normally obtained in case of standard pictures and pictorial experience thereof (for a recent review see Ferretti 2020a, 2020c, 2021b).

However, those accounts on the role of action in pictorial perception are on the side of the action processing pertaining to what the subject could do with respect to the potential motor interaction with the surface, or, in illusory cases, with what is depicted. That is, we are talking about the visual representations related to action with respect to the surface, or, in illusory cases, with the pictorial object, or the pictorial space. Let us go more slowly on this.

In usual picture perception, when we have proper pictorial experience, the *conscious* visual representations related to action with respect to the pictorial object (the way to interact with it), or the pictorial space are, so to speak, silenced. Of course, we can imagine what we could do with respect to the depicted object, or how our perspective would change as we move, were the depicted object a real object. However, this would not count as pictorial experience, i.e. as an experience of a pictorial object with respect to these motor aspects. Indeed, vision related to action processing for detecting presence for interaction is not at work with pictorial objects, as it is attuned to the surface, which is a present object our visual system for action can track - in this respect, however, our *unconscious* motor representations at the brain level can be activated with respect to pictorial action possibilities, that is, by the geometrical characteristics of the objects that, were the object real, would permit us to represent how to interact with the object (for a technical review, see Ferretti 2016a; see also Zipoli Caiani 2013; 2016). So, we cannot consciously represent the object as offering any suitable possibility for motor interaction (for more details, see Ferretti 2018; 2021b).

Precisely for this reason, if the accounts mentioned above are right, that is, precisely because our visual system for action can track the presence of a surface, our visual brain is not using those motor processes upon the depicted object (which otherwise would be illusory seen as a present object), so as that we can enter pictorial experience.

So, pictorial experience is peculiar also because the visual states related to the detection of presence for action are attuned only to the surface and, for these reason, silenced with respect to the pictorial space - though, as said, there can be automatic and subpersonal visuomotor responses, at the brain level, with respect to the pictorial space (cf. § 4). This is what happens in order to enter usual pictorial experience (Ferretti 2021b).

However, when we are not in front of an illusion as those above mentioned, we can perceive how the pictorial space emerges from the marks upon the surface: the marks are visually encoded as the

components of the pictorial space that have been realized across the surface, which is the bearer of the pictorial content.

And, as we have seen, recognizing and appreciating the surface as the bearer, the vehicle, of the pictorial content, that is, of the pictorial meaning, is crucial for us to enter *pictorial aesthetic appreciation*.

Arguably, one may speculate that we are thus appreciating how the marks have been made by the artist, and this is part of this aesthetic appreciation.

If so, this opens to another crucial role for action not only in order to enter pictorial experience, but also to enter aesthetic appreciation.

Indeed, we might speculate that there is a part of action processing that is not involved in what the subject could do with the surface, or, in illusory cases, with the pictorial objects. Rather, action processing can guide the spectator to properly visually represent, by means of very specific visuomotor representations, what has been done by the artist. This could lead, as anticipated, to a kind of aesthetic appreciation depending on the spectator being capable of appreciating that the pictorial content is something emerging from the marks on the surface generated by means of specific motor acts of the artist. The visual representation of these motor acts might be, in turn, responsible for the appreciation of a pictorial meaning as the result of a human *poietic* expertise.

This speculation is the protagonist of the present manifesto and is analysed in the next section. In this respect, there is plenty of evidence showing that the visuomotor system of the spectator can effectively represent the action not related to the surface of the pictorial object (i.e. the action that could be performed upon the surface), but related to the movements that have been executed, and are indeed needed to realize the marks upon the surface that, in turn, let the pictorial content to emerge. This can be a strong representational component of *aesthetic appreciation of pictures*.

But, if aesthetic appreciation is related to visually representing how the pictorial content is (in some cases, nothing but) what results from marks on the surface, then, understanding, perceptually, but also motorically, how these marks have been realized, by the artist, and which actions have shaped them in order to lead to appreciate what is represented in the pictorial space, can be seen, *ipso facto* and *a fortiori*, as a crucial component of *pictorial aesthetic appreciation*.

Interestingly, if so, that is, if *aesthetic appreciation* turns out to be not only given by a visual recognition given by visual attention to both the surface and the depicted object (Ferretti, Marchi 2020; but see also Nanay 2016; 2017), but also by building a visuomotor representation of the gestures that have been employed in order to realize the marks at the basis of the painting, then, it is possible to talk about what I will call here *Motoric Aesthetic Appreciation* of pictures.

The reader should note that, while the notion that motoric representations may be involved in aesthetic appreciation of pictorial contents has been at the center of neuroaesthetics, a proper conceptual and theoretical treatment of the implications of these studies for our best philosophical accounts of aesthetic appreciation of pictures has not been offered yet. This paper wants to propose a manifesto whose aim is to solicit the philosophical literature to fill this gap. For this reason, the reader should see this attempt not as offering a theory of *Motoric Aesthetic Appreciation* of pictures, but rather as a manifesto of the way such a peculiar aspect of *Aesthetic Appreciation* of pictures should be investigated.

In order to do so, the next section discusses the relevant sets of experimental results philosophers should consider if they want to explore the idea of a *Motoric Aesthetic Appreciation* of pictures.

4 Motoric Aesthetic Appreciation

Philosophical discussion and/of experimental results from visual and motor neuroscience suggested that vision and action are deeply related in several manners.⁷ And this is true even for visual processing related to pictorial experience (Ferretti 2016c; 2018a; 2020b; 2021b).

Now, the field of neuroaesthetics has recently offered experimental results that can tell us something important about aesthetic appreciation (Di Dio, Gallese 2009; Jacobsen et al. 2006; Freedberg, Gallese 2007).

Aesthetic appreciation can of course be, in many respects, driven by an emotional experience. It is not by chance that several correlates of emotional states are found to be activated during the appreciation of visual arts (Di Dio, Gallese 2009; Jacobsen et al. 2006; Freedberg, Gallese 2007). This is perfectly in line with philosophical accounts suggesting that pictorial objects can foster emotional responses (Ferretti 2017a) and specific feelings (Kemp 2020). And both of these responses can be related, one might also suppose, to action and motoric processing.

Indeed, in the case of emotions in pictorial experience, it has been suggested, on the basis of the philosophical analysis of several experimental results, that the areas of the brain involved in visual recognition and vision-for-action are anatomo-functionally connected to emotional areas, which feed the visual areas infusing emotional charge to the visual content. The activity of these areas can be appreciated, for example, with respect to pleasant or unpleasant emotion-

⁷ Clark 2001; 2007; Briscoe, Grush 2015; Ferretti, Zipoli Caiani 2019; Ferretti 2016b; 2020b; 2021a; 2021b; 2021c; Zipoli Caiani, Ferretti 2017.

al responses during the recognition of pictorial contents. There are, however, also different cases concerning simple depicted objects recalling emotionally aversive motor situations (a broken object whose manipulation could be risky), or depicted people or human interactions displaying an emotional content (Ferretti 2017a, esp. Sect. 5.1).

In this respect, for example, it has been noted that pictorial objects can evoke motor responses directly related to the emotional sensation fostered by the depicted scene, this leading the spectator to represent, from a motor point of view, for example, the object as dangerous. And this can be related to a sensation of pain concerning the potential motor response (Ferretti 2017a, 609). Thus, as the reader can appreciate, there are emotional responses, with respect to motor interaction, even in the case of the perception of depicted objects.

Accordingly, a few lines above (§ 3) I have also already specified that the literature has suggested that though our *unconscious* motor representations can be activated with respect to pictorial action possibilities, that is, by the geometrical characteristics of the objects that, were the object real, would permit us to represent how to interact with the object, we cannot consciously represent the object as offering any suitable possibility for motor interaction (for a technical review, see Ferretti 2016a; 2018b). In accordance with this, pictorial objects can elicit in the spectator an emotional response related to the representation of action possibilities (Ferretti 2017a, 609) and this counts as a response even if this representation is unconscious.

But these are all examples of emotional responses concerning the action recalled by the object in the pictorial space.

There is the need for a small and final clarification here. I said you can have motoric responses about action possibilities from the subpersonal (and unconscious) point of view with respect to the pictorial space. That is, your visuomotor system can give rise to the simulation of a motor action that concerns the geometrical arrangement of the pictorial object, as the shape of the object recalls its action properties, those upon which you may act if the object were real. This is why it has been suggested that our visual brain can attribute action properties also to depicted objects. This is an automatic, subpersonal and unconscious visuomotor response (see Ferretti 2016a; 2018b) and can be related to emotional encoding of the pictorial content (Ferretti 2017a). However, at the personal (conscious) level, you do not consciously perceive any possibility of action as, indeed, depicted objects are two-dimensional objects you recognize to be confined within the pictorial space, and not actually present for motor interaction. This personal component of vision-for-action is silenced in picture perception, with respect to the pictorial space (Ferretti 2020a; 2020c; 2021b), cf. § 3. These two ideas are perfectly compatible (2021b). In particular, in usual picture perception, the visual system can *unconsciously* track the presence of a surface for

motor interaction, thanks to a high-level computational mechanism called *response selection* for *action planning* related to *vision-for-action*, while (and because of this former perceptual fact) at the conscious level the subject realizes that the object is pictorial and no *vision-for-action* can be consciously exercised on the pictorial space (thus, *vision-for-action* is, as said above, silenced). However, there is a low-level, subpersonal, computational motor component, the one related to *motor programming*, which cannot distinguish between real and pictorial objects, and thus automatically responds with respect to the geometrical arrangement of the pictorial object that concerns shape aspects that would be relevant if the object were real, but this seems to have no role in our high-level elaboration of the pictorial content (furthermore, this mechanism also responds to the action possibilities of the surface). Summing up, *automatic visuomotor responses* for *motor programming*, which can be activated in relation to the pictorial space, are just a small component of *vision-for-action*, especially because there is a more crucial component, which is the one related to the detection of presence for actual motor interaction, which is the one that actually allows the spectator to visually recognize, even if at the *unconscious* level, the actual presence for interaction of the surface, as well as, at the *conscious* level, the pictoriality of the depicted object. So, recognition of actual presence for motor interaction and mere visuomotor ascription of action properties are two different processes of *vision-for-action*, and only the former is crucial for detecting pictoriality. For a complete review of these aspects, which I cannot explain in full details here, see (Ferretti 2016a; 2016c; 2018b; 2020a; 2020c; 2021).

This also further clarifies the nature of the unconscious emotional responses concerning the action recalled by the object in the pictorial space. Now, what about the perception of the action made by the painter? And what about the possibility for the spectator of representing it?

A response comes from a review of results, in the field of neuroaesthetics, by Freedberg and Gallese (2007), in which the analysis of the brain resonance to pieces of visual art led the authors to suppose that

even the artist's gestures in producing the art work induce the empathetic engagement of the observer, by activating simulation of the motor program that corresponds to the gesture implied by the trace. The marks on the painting or sculpture are the visible traces of goal-directed movements; hence, they are capable of activating the relevant motor areas in the observer's brain. Despite the absence of published experiments on this issue, the mirror-neuron research offers sufficient empirical evidence to suggest that this is indeed the case. Several studies show that motor simulation can be induced in the brain when what is observed is the

static graphic artifact that is produced by the action, such as a letter or a stroke. (202)

The authors quote a very informative study by Knoblich et al. (2002), in which, after observation of graphic trajectories made by other subjects, participants seem to be able to simulate the action used in order to generate such graphic trajectories. This perceptual-motor fact has been tested by making participants observing the strokes made by other subjects and, on the basis of the observation, checking the predictions made by the participants about the action related gesture concerning the strokes observed in different tasks.

Of course, in line with what we know about motor expertise (Ferretti 2016b; 2020b; Ferretti, Zipoli Caiani forthcoming), “The more the actions that one observes resemble the way one would carry them out oneself, the more accurate the simulation” (Knoblich et al. 2002, 1027). Accordingly, “authorship effects not only are interesting in themselves but also provide a way to address the issue of whether the action system contributes to action perception” (1044). This is in line with the idea that: “action perception is often accompanied by action simulation” (1030).

And this could tell us something about how art experts and artists may be more exposed to aesthetic judgment, a judgment that not only depends on skills such as proper attention distribution (Vogt, Magnussen 2007; see also Ferretti, Marchi 2020; Nanay 2015b), but also, arguably, on motor expertise.

Evidence such as this, Freedberg and Gallese suggest, “shows that our brains can reconstruct actions by merely observing the static graphic outcome of an agent’s past action. This reconstruction process during observation is an embodied simulation mechanism that relies on the activation of the same motor centers required to produce the graphic sign. We predict that similar results will be obtained using, as stimuli, art works that are characterized by the particular gestural traces of the artist, as in Fontana and Pollock” (Freedberg, Gallese 2007, 202).

This evidence is in line with those results showing (see the discussion by Di Dio, Gallese 2009 of these results) a crucial involvement in aesthetic representations of several activations of brain areas such as the parietal cortex (Kawabata, Zeki 2004; Cela-Conde et al. 2009; Cupchik et al. 2009), and related premotor areas (Jacobsen et al. 2006), which are very crucial areas involved in both spatial encoding and awareness, as well as in motor representations concerning both one’s own actions and the simulation of others’ actions.⁸ All

⁸ Gallese 2005; 2007; Fogassi, Luppino 2005; Fadiga et al. 2000; for a philosophical analysis, see Ferretti 2016b; 2017a; 2018b.

these studies analyse, in different manners, the relation between motor, spatial and emotional encoding during aesthetic appreciation.

The reader should note that, while several philosophical accounts have previously stressed the role of brain motor areas not only in the visual encoding of the presence of the surface, but also in the motor resonance concerning the motor act recalled by the kind of depicted objects the visual system is computing (Ferretti 2016a; 2018b), these new sets of evidence stress something deeper. They are about motoric responses, in the spectator, concerning the action performed by the artist.

But this also opens to a new view of aesthetic representations. Indeed, aside from a purely cognitive view of aesthetic appreciation, the idea is that “a crucial element of aesthetic experience of artworks consists of the activation of the embodied simulation of actions, emotions, and corporeal sensations, and that these mechanisms are universal” (Di Dio, Gallese 2009, 683). Thus, it is suggested the importance of “the empathic nature of the relationship automatically established between artworks and beholders” (Di Dio, Gallese 2009, 683). As the authors suggest, all these sets of evidence lead to a new view of aesthetic appreciation, which is embodied, and which “consists of two components: firstly, the relationship between embodied simulation-driven empathic feelings in the observer and the representational content (the actions, intentions, objects, emotions and sensations portrayed in a given painting or sculpture); secondly, the relationship between embodied simulation-driven empathic feelings in the observer and the visible traces of the artist’s creative gestures (i.e. vigorous modelling in clay or paint, brushwork and signs of the movement of the artist’s hand)” (683).

Note that the basic assumptions in these studies (cf. the reviews by Di Dio, Gallese 2009; Freedberg, Gallese 2007) is that the motor mechanisms at the basis of the productions of one’s own actions also are at the basis of the simulation of the same observed actions when produced by others, as the investigation on mirror mechanisms suggests (see, for example, Gallese 2005; 2007).

This is very interesting also because it suggests that there is a motoric expertise, related to aesthetic appreciation, which the spectator has to share with the painter, as for the former to have a specific motoric understanding of the motor performance, behind the gesture, of the latter. This recalls the idea that, during what is called correct picture perception, a spectator understands the painter’s intention and, thus, can correctly see what is actually represented in the pictorial space, as to have a correct representation of the depicted object (Wollheim 1998).

These results constitute the basis for the manifesto presented here. They permit to explore the idea that there is an important role for action not only in usual pictorial experience, but also in aesthetic appre-

ciation, as it seems very likely, from these results, that the visual states related to action processing also play a role in allowing the spectator to enter aesthetic appreciation thanks to motoric processing.

But then, these states must figure not only in our best explanation of how pictorial experience, in quality of a peculiar visual experience, can be actually reached, or is correctly generated (as recently suggested, Ferretti 2021b). They appear to be crucial also for the way pictures are a source of aesthetic appreciation.

Indeed, coupling these results with the famous claim in the philosophical literature above reported, namely that during aesthetic appreciation the viewer visually represents the surface as the vehicle, or the bearer, of the marks from which the pictorial space emerges, i.e. of the pictorial content, leads us to appreciate the main idea proposed within the present manifesto: that there are motor representations related not to the viewer's own potential action with respect to the picture, but which allow the spectator to encode the act of painting of the artist, which may lead the viewer to perceive how, due to the motor expertise of the painter, the marks are realized on, as well as emerge from, the surface upon which the pictorial object is visually represented. More specifically, the spectator can motorically represent the gesture related to the action that the artist has performed in order to generate the marks on the surface the pictorial space results from. And this could arguably happen to be an important perceptual-motor aspect at the basis of the aesthetic appreciation of a pictorial content.

There is a final worry I need to address here. Note that, in line with critics moved to these ideas, in particular to Freedberg and Gallese (2007) by Casati and Pignocchi (2007), I am not suggesting here that these brain responses are *constitutive* of aesthetic experiences, but just that action mechanisms and motor representations can play an important role in allowing us to represent the gesture of the painter, and this could be a crucial aspect of aesthetic appreciation, as defined here.

In particular, I am not simply saying that motor responses are at the basis of aesthetic appreciation without any further argument. The one offered here is a two-step argument. If, according to philosophers, the perception of the surface as the bearer, the vehicle, of the pictorial content emerging from the marks made by the artist is at the basis of aesthetic appreciation, and if motoric responses are at the basis of the perceptual understanding of the surface as being something motorically marked by the artist, upon whose action depends the visually encoded content (again, across the surface) generating the pictorial space, then, motoric responses can play a crucial role in aesthetic appreciation. This claim is more philosophically elaborated, while less demanding, than the claim that the mere activation of the mirror system for the action behind the encoded marks

is *constitutive* of aesthetic experience, which is the one specifically opposed by Casati and Pignocchi.

5 Conclusion

Aesthetic pictorial appreciation, the philosophical literature suggests, requires that the spectator can visually represent both the surface and the depicted object, as to visually represent the former as the material bearer of the latter.

This paper suggests that a further good philosophical idea to investigate is that of postulating that at the basis of *aesthetic pictorial* appreciation there is the plethora of representational mechanisms by means of which the spectator realizes, both perceptually and motorically (as these are visuomotor processes), that the pictorial space is something emerging from the marks of the depicted surface, produced by means of specific of skillful motor acts of the painter. The visual representation of these motor acts constitutes the basis for the appreciation of the pictorial content as the result of a sort of human *poietic* expertise in the artistic manipulation of the surface as a material design.

Motor representations, thus, play a crucial role in, and are important representational components of *aesthetic* appreciation of pictures, in which the surface is visually represented as the concrete bearer of the visual significance of a pictorial space. Indeed, motor representations – related not to the spectator’s own potential action concerning the picture, but to the act of painting of the artist – permit us to understand how what is visually elaborated on the surface is the result of an ensemble of marks made by the motor acts of the painter on such surface. And motorically representing these acts allow us to enter *aesthetic pictorial* appreciation. Or, we might say, *Aesthetic Appreciation* of pictures is *Motoric Aesthetic Appreciation*.

The conclusion of the analysis of the empirical results above discussed is that the motor mechanisms related to action processing have a special role in order for the spectator to achieve both *correct pictorial experience* and *aesthetic pictorial* appreciation.

A final clarification on the purpose of this paper is needed. As the reader can realize, I have not been offering any strict philosophical argument to defend the thesis I propose here as following from the evidence discussed. But remember that the present paper, *qua* manifesto, simply wants to flag some important and fruitful routes for the philosophical literature, whose specific theoretical pathways, however, should be analysed under a more specific philosophical scrutiny.

In this respect, there are many ways in which the thesis proposed in this paper might be spelled out and defended, especially with respect to the specific interpretation we decide to offer in order to describe the experimental results that are significant for such a thesis.

The scope of the present paper was precisely to suggest that we have enough empirical evidence to suppose that motor processing plays an important role in aesthetic appreciation. But this is a very general thesis. I have suggested some more specific ways of looking at this thesis, and with respect to the literature on picture perception, on the basis of the experimental results we can dispose of. Like several sets of evidence used to defend a philosophical claim, however, also those will need an initial conceptual clarification and a philosophical analysis. This indeed will be important if we want to explicitly show how the experimental results from neuroaesthetics can be precisely used in order to defend a specific philosophical claim, and not a very general idea, with respect to the many others we could cash out from them, and in relation to the general thesis flagged in this paper.

Acknowledgements

I would like to warmly thank the anonymous reviewers for addressing important comments. This work was supported by a Humboldt Fellowship, hosted by Professor Albert Newen at the Institute for Philosophy II, Ruhr-University Bochum, Germany.

Bibliography

- Briscoe, R.; Grush, R. (2015). "Action-based Theories of Perception". *The Stanford Encyclopedia of Philosophy*, 1-66. <https://plato.stanford.edu/archives/spr2017/entries/action-perception/>.
- Casati, R.; Pignocchi, A. (2007). "Mirror and Canonical Neurons are not Constitutive of Aesthetic Response". *Trends in Cognitive Sciences*, (11)10.
- Cela-Conde, C.J. et al. (2009). "Sex-related Similarities and Differences in the Neural Correlates of Beauty". *Proceedings of the National Academy of Sciences of the United States of America*, 106, 3847-52.
- Clark, A. (2001). "Visual Experience and Motor Action: are the Bonds Too Tight?". *Philosophical Review*, 110, 495-519.
- Clark, A. (2007). "What Reaching Teaches: Consciousness, Control and the Inner Zombie". *The British Journal for the Philosophy of Science*, 58(3), 563-94.
- Cupchik, G.C. et al. (2009). "Viewing Artworks: Contributions of Cognitive Control and Perceptual Facilitation to Aesthetic Experience". *Brain and Cognition*, 70(1), 84-91.
- Di Dio, C.; Gallese, V. (2009). "Neuroaesthetics: A Review". *Current Opinion in Neurobiology*, 9, 682-7.
- Fadiga, L. et al. (2000). "Visuomotor Neurons: Ambiguity of the Discharge or 'Motor' Perception?" *International Journal of Psychophysiology*, 35, 165-77.

- Ferretti, G.; Zipoli Caiani, S. (2019). "Between Vision and Action. Introduction to the Special Issue". *Synthese*. <https://doi.org/10.1007/s11229-019-02518-w>.
- Ferretti, G. (2016a). "Pictures, Action Properties and Motor Related Effects". *Synthese, Special Issue: Neuroscience and Its Philosophy*, 193(12), 3787-817. <https://doi.org/10.1007/s11229-016-1097-x>.
- Ferretti, G. (2016b). "Through the Forest of Motor Representations". *Consciousness and Cognition*, 43, 177-96. <http://dx.doi.org/10.1016/j.concog.2016.05.013>.
- Ferretti, G. (2016c). "Visual Feeling of Presence". *Pacific Philosophical Quarterly*, 99, 112-36. <https://doi.org/10.1111/papq.12170>.
- Ferretti, G. (2017a). "Pictures, Emotions, and the Dorsal/Ventral Account of Picture Perception". *Review of Philosophy and Psychology*, 8(3), 595-616. <https://doi.org/10.1007/s13164-017-0330-y>.
- Ferretti, G. (2017b). "Are Pictures Peculiar Objects of Perception?". *Journal of the American Philosophical Association*, 3(3), 372-93. <https://doi.org/10.1017/apa.2017.28>.
- Ferretti, G. (2018a). "The Nature of Pictorial Representations". *Phenomenology and Mind*, 14, 136-44. https://doi.org/10.13128/Phe_Mi-23631.
- Ferretti, G. (2018b). "The Neural Dynamics of Seeing-In". *Erkenntnis*, 84(6), 1285-324. <https://doi.org/10.1007/s10670-018-0060-2>.
- Ferretti, G. (2019). "Perceiving Surfaces (and What They Depict)". Glenney, B.; Silva, J.F. (eds), *The Senses and the History of Philosophy*. New York: Routledge.
- Ferretti, G. (2020a). "Why *Trompe l'oeils* deceive our Visual Experience". *The Journal of Aesthetics and Art Criticism*, 78-1, 33-42.
- Ferretti, G. (2020b). "Anti-Intellectualist Motor Knowledge". *Synthese*. <https://doi.org/10.1007/s11229-020-02750-9>.
- Ferretti, G. (2020c). "Do *Trompe l'oeils* Look Right When Viewed from the Wrong Place?". *The Journal of Aesthetics and Art Criticism*, 78(3), 319-30. <https://doi.org/10.1111/jaac.12750>.
- Ferretti, G. (2021a). "A Distinction Concerning Vision-for-Action and Affordance Perception". *Consciousness and Cognition*, 87. <https://doi.org/10.1016/j.concog.2020.103028>.
- Ferretti, G. (2021b). "Why the Pictorial needs the Motoric". *Erkenntnis*. <https://doi.org/10.1007/s10670-021-00381-1>.
- Ferretti, G. (2021c). "On the Content of Peripersonal Visual Experience". *Phenomenology and the Cognitive Sciences*. <https://doi.org/10.1007/s11097-021-09733-2>.
- Ferretti, G.; Marchi, F. (2020). "Visual Attention in Pictorial Perception". *Synthese*. <https://doi.org/10.1007/s11229-020-02873-z>.
- Ferretti, G.; Zipoli Caiani, S. (forthcoming). "How Knowing-That and Knowing-How Interface in Action: The Intelligence of Motor Representations". *Erkenntnis*.
- Freedberg, D.; Gallese, V. (2007). "Motion, Emotion and Empathy in Esthetic experience". *TRENDS in Cognitive Sciences*, 11, 5.
- Fogassi, L.; Luppino, G. (2005). "Motor Functions of the Parietal Lobe". *Current Opinion in Neurobiology*, 15(6): 626-31.
- Gallese, V. (2005). "Embodied Simulation: From Neurons to Phenomenal Experience". *Phenomenology and the Cognitive Science*, 4, 23-48.
- Gallese, V. (2007). "The 'Conscious' Dorsal Stream: Embodied Simulation and Its Role in Space and Action Conscious Awareness". *Psyche*, 13(1), 1-20.

- Hopkins, R. (2010). "Inflected Pictorial Experience: Its Treatment and Significance". Abell, C.; Bantilaki, K. (eds), *Philosophical Perspectives on Depiction*. Oxford: Oxford University Press.
- Hopkins, R. (2012). "Seeing-in and Seeming to See". *Analysis*, 72, 650-9.
- Jacobsen, T. et al. (2006). "Brain Correlates of Aesthetic Judgment of Beauty". *Neuroimage*, 29, 276-85.
- Kawabata, H; Zeki, S. (2004). "Neural Correlates of Beauty". *Journal of Neurophysiology*, 91, 1699-705.
- Kemp, G. (2020). "The Artistic Expression of Feeling". *Philosophia*. <https://doi.org/10.1007/s11406-020-00252-z>.
- Knoblich, G. et al. (2005). "Authorship Effects in the Prediction of Handwriting Strokes: Evidence for Action Simulation During Action Perception". *The Quarterly Journal of Experimental Psychology*, A55(3), 1027-46.
- Kulvicki, J. (2006). *On Images: Their Structure and Content*. Oxford: Oxford University Press.
- Lopes, D. M. (2005). *Sight and Sensibility*. Oxford: Oxford University Press.
- Nanay, B. (2010). "Inflected and Uninflected Experience of Pictures". Abell, C.; Bantilaki, K. (eds), *Philosophical Perspectives on Depiction*. Oxford: Oxford University Press.
- Nanay, B. (2011). "Perceiving Pictures". *Phenomenology and the Cognitive Sciences*, 10, 461-80.
- Nanay, B. (2015a). "Trompe l'oeil and the Dorsal/Ventral Account of Picture Perception". *Review of Philosophy and Psychology*, 6, 181-97.
- Nanay, B. (2015b). "Aesthetic Attention". *Journal of Consciousness Studies*, 22(5-6), 96-118.
- Nanay, B. (2016). *Aesthetics as Philosophy of Perception*. Oxford: Oxford University Press.
- Nanay, B. (2017). "Threefoldness". *Philosophical Studies*, 175, 163-82. <https://doi.org/10.1007/s11098-017-0860-2>.
- Vogt, S.; Magnussen, S. (2007). "Expertise in Pictorial Perception: Eye-movement Patterns and Visual Memory in Artists and Laymen". *Perception*, 36(1), 91-100.
- Voltolini, A. (2013). "Why, as Responsible for Figurativity, Seeing-in can Only be Inflected Seeing-in". *Phenomenology and the Cognitive Sciences*, 14(3), 651-67.
- Wollheim, R. (1980). "Seeing-as, Seeing-in, and Pictorial Representation". *Art and Its Object*. 2nd ed. Cambridge: Cambridge University Press, 205-26.
- Wollheim, R. (1998). "On Pictorial Representation". *The Journal of Aesthetics and Art Criticism*, 56, 217-26.
- Zipoli Caiani, S. (2013). "Extending the Notion of Affordance". *Phenomenology and the Cognitive Sciences*, 13, 275-93. <https://doi.org/10.1007/s11097-013-9295-1>.
- Zipoli Caiani, S. (2016). "Through the Flat Canvas: The Motor Meaning of Realistic Paintings". *Aisthesis*, 2(9), 197-217. <https://doi.org/10.13128/Aisthesis-19425>.
- Zipoli Caiani, S.; Ferretti, G. (2017). "Semantic and Pragmatic Integration in Vision for Action". *Consciousness and Cognition*, 48, 40-54. <http://dx.doi.org/10.1016/j.concog.2016.10.009>.