



# Not So Blue to be Sad: Affective Affordances and Expressive Properties in Affective Regulation

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## Abstract

In our everyday interaction with the environment, we often perceive objects and spaces as opportunities to feel, maintain, enhance, and change our affective states and processes. The concept of affective affordance was coined to accommodate this aspect of ordinary perception and the many ways in which we rely on the material environment to regulate our emotions. One natural way to think of affective affordances in emotion regulation is to interpret them as tools for regulating felt affective states. We argue that this way of conceiving of affective affordances is too restrictive. By analyzing the role of expressive properties of objects and spaces in emotion regulation, we show that our environment does not need to elicit felt affective states to regulate our emotions. Thus, we revise the concept of affective affordance to accommodate these cases. This revised concept explains more with less. Hence, it should be preferred in wide-reaching philosophical projects that aim to explain human affectivity as a situated phenomenon.

**Keywords** Affective affordances · Emotions · Emotion regulation · Expressive properties · Situated affectivity

## 1 Introduction

The material world we inhabit affords many things to us. For example, mug handles afford grasping, glasses afford drinking, big pizzas afford sharing, abacuses afford counting, and books afford flipping through, reading, thinking, and imagining. We —organisms with certain bodies and certain motor and mental skills— do not usually perceive our material world as action-neutral. Rather, we perceive it as an incredible source of action-possibilities: opportunities for performing embodied, mental, and social actions of different types (Costall 1995; Heft 1989; Heras-Escribano 2019; Bruineberg and van den Heerik 2021; Gibson 2015; McClelland 2020; Segundo-Ortin 2022; Segundo-Ortin and Heras-Escribano 2023). The concept of *affordance* is

usually used to explain this aspect of our ordinary perceptual relationship with the material world.

Still, recently some philosophers and cognitive scientists have suggested that it can also come in handy to explain another important aspect of ordinary perception: the fact that more than often we do not perceive the environment as emotionally neutral but rather as a source of emotion-possibilities, i.e., opportunities to elicit, feel, and regulate our emotions. The concept of *affective affordance* has been coined to explain this aspect, and in particular how our perceptual relationship with certain objects and spaces contributes to eliciting, shaping, and guiding emotional experiences and behaviors (Caravà and Scorolli 2020; Carvalho 2022; Griffiths & Scarantino, 2008; Heersmink 2021; Hufendiek 2017; Krueger and Colombetti 2018; Piredda, 2020; Viola 2021).

In this paper, we discuss one way of using the concept of affective affordance: that proposed by Joel Krueger and Giovanna Colombetti in their explanation of how material objects and spaces contribute to emotion regulation (Krueger and Colombetti 2018). Although we agree with most aspects of their account, we show that their concept of affective affordance entails an important problem: it fails to explain a particular but relevant set of cases. These are cases in which certain objects or spaces seem to be, in some

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sense, ‘affectively silent’. They neither elicit *felt* emotions in the perceiver nor do they enhance or shape felt aspects of their emotional experiences; yet they play a relevant role in emotion regulation.

We proceed as follows. First, we reconstruct Kruger and Colombetti’s concept of affective affordance (§ 2). Second, we identify one central problem in their account. (§ 3). Third, we analyze a particular instance of emotion regulation that does not always entail the regulation of felt emotions: the emotional-regulative role of expressive properties. Building on this analysis, we revise the concept of affective affordance and extend it to a wider set of cases, including the apparently counterintuitive case of affectively silent objects and spaces. (§ 4). Lastly, we summarize our argument and conclude (§ 5).

## 2 Affordances Between Action and Emotion

In this section we reconstruct Krueger and Colombetti’s concept of affective affordance (Krueger and Colombetti 2018) and clarify its explanatory role in the situated approach to affectivity, which is where this concept is mostly used. We proceed in two steps. First, we introduce the ‘classical’ concept of affordance: AFFORDANCE FOR ACTION (§ 2.1). Second, we show how Krueger and Colombetti’s concept of AFFECTIVE AFFORDANCE accommodates and revises some features of AFFORDANCE FOR ACTION to account for cases in which material objects and spaces play a relevant role in emotion regulation (§ 2.2).

### 2.1 Affordances for Action

AFFORDANCE FOR ACTION was introduced by ecological psychologist James Gibson in *The Senses Considered as Perceptual Systems* and then refined in *The Ecological Approach to Visual Perception* (Gibson 1966, 2015). Gibson’s definition of AFFORDANCE FOR ACTION is quite simple: “[t]he affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill” (Gibson 2015: 119). Yet, it grasps an important aspect of ordinary perception: human and non-human animals do not primarily see their environment as a set of properties, like color, shape, and size, but directly perceive it as a source of opportunities for action (Siegel 2014). For example, a bug certainly sees the surface of a swamp as shining and slowly moving. Nonetheless, its primary mode of perception is not to observe or to visually study these properties but to detect this surface as an opportunity for running or walking (Gibson, 1979). Or, again, a chimp does not primarily perceive a tree as a tall, brown, and green object, but rather as an opportunity for climbing (Warren 1984). And a human

does not primarily see a chair as a solid and black object but rather as an opportunity to sit or jump onto (Mark 1987; Tucker and Ellis 1998).

AFFORDANCE FOR ACTION is now a popular concept in several disciplines and research subfields. To mention some, it appears in research in neuroscience (Cisek and Kalaska 2010), cognitive psychology (Tucker and Ellis 2000), social psychology (Borghi 2018), pain and psychopathology research (Coninx 2023; Coninx and Stilwell 2021), phenomenology (Dreyfus 2002), aesthetics (Stokhof 2022), design (Norman 1988), artificial intelligence (Horton, Chakraborty, & Amant, 2012), feminist philosophy (McClelland and Silwa 2022), and disability studies (Dokumaci 2023). In this rich body of studies there is not always a univocal use of AFFORDANCE FOR ACTION, either across and within disciplines and subfields (Chemero 2003; Chong and Proctor 2020). Still, most agree that AFFORDANCE FOR ACTION has three core features: (1) Complementary action dispositions, (2) Perceptual detection, and (3) Action guidance.<sup>1</sup>

#### (1) Complementary action dispositions

Affordances require complementary dispositions involving an animal with a certain body and motor abilities and an object or environmental feature with certain material and dynamical properties. For instance, the climbability of a tree is a result of the fact that the tree is a vertical and tall object, that it has rough bark and not too many branches, and that the perceiver has hands, legs, feet, and the ability to grasp and to stand upright. The tree would not afford climbing if the perceiver was on a wheelchair or if the tree was as tall as the perceiver or full of thorns and dense branches. As philosopher Tom McClelland explains citing the work of ecological psychologist Michael Turvey (Turvey 1992), the climbability of a tree and the perceiver’s ability to climb “[a]re a mutually dependent pair of dispositional properties, much like a sugar cube’s disposition to dissolve in my tea and my tea’s disposition to dissolve the sugar cube” (McClelland 2020: 403).

Thus, affordances require a match between action-dispositions that supervene on the material structure of an object, surface, or space, i.e., their disposition to be acted upon in certain ways based on their material and dynamical properties, and action-dispositions that supervene on the embodied features of an agent, i.e., their ability to perform certain kinds of actions based on the body they have. Such a dispositionalist approach to affordances does not necessarily

<sup>1</sup> See McClelland (2020) for a similar claim but note that our conception of feature (3) is broader. McClelland identifies action potentiation as one of the core features of affordance for action. Our feature (3) includes action potentiation as an aspect of action control but does not reduce action control to action potentiation.

entail (relatively) strong ontological commitments, such as that affordances *are* relations of the organism-environment system (Stoffregen 2003). More modestly, and in line with some of the extant psychological accounts (Turvey 1992), it entails that the instantiation of affordances depends on relations between action-dispositions.<sup>2</sup>

## (2) Perceptual detection

Affordances are detectable through perception. Cognitive psychologists, neuroscientists, and philosophers have mostly focused on the visual detection of affordances, such as, e.g., seeing the handle of a mug as graspable or seeing a door as pushable or pullable (Nanay 2012; Tucker and Ellis 1998). Still, several experimental studies have shown that affordances can be detected also through other sensory modalities. Work on sound source distance perception has shown that adult listeners perceive action-relevant properties through hearing, notably the reachability of auditory objects (Rosenblum et al. 1996). Moreover, work on smell perception has shown that action-properties, such as, e.g., approach-, avoid-, and consume-properties, can be conveyed by odors: this suggests that affordances are detectable also through smell (Castro and Seeley 2014). Taken together, these works show that the relevant level of analysis for the detection of affordances is perception in general, not only visual perception.

## (3) Action control

Affordances control action performance in various ways. First, they potentiate action: they prepare agents to act upon their environment. Action potentiation is usually understood as the automatic activation of sub-personal motor representations triggered by the perception of objects and spaces (Grèzes, Tucker, Armony, et al., 2003). These representations are activated prior to and independently from forming intentions to perform an action upon the perceived object (Tucker and Ellis 1998). This suggests that affordances control action at really early stages.

Second, affordances facilitate action selection. Activating motor representations of different objects facilitates the selection of optimal motor patterns in the brain (Cisek and Kalaska 2010), which in turn allow for the automatic selection of motor paths prior to conscious reasoning or action-planning. Moreover, work on soliciting affordances suggests that action selection is facilitated by our conscious experience of affordances. Affordances do not matter equally in perceptual experience. Rather, some objects, spaces, and layouts stand out as relevant for action based on the subject's

motives, concerns, and goals, and on the context in which the subject is situated, including its normative aspects (van den Herik and Rietveld 2021; Rietveld and Kiverstein 2014; Rietveld 2008). These affordances are called 'soliciting affordances': affordances that invite the subject to perform particular actions in particular environments. Soliciting affordances contribute to action selection by drawing the subject's attention to particular features of the environment and by eliciting felt action-tendencies towards those (and not other) environmental features (Dings 2018). By doing so, they function as 'action-selectors' at the personal level. They automatically provide subjects with phenomenological resources (i.e., felt action-tendencies) that push them to act in certain ways in certain contexts.

Third, affordances control the attunement of motor actions to the environment over time. Our ordinary perception is motorically and temporally dynamic. We move in our environment and by doing so we structure our perceptual array at different stages of action performance (Noë 2004). This temporally extended perceptual navigation is guided by the affordances we perceive: we directly see objects, spaces, and layouts as affording or preventing certain motor actions. Through this affordance-based dynamical perceptual guidance, our actions continue to get attuned to the context over time, and they do so more or less automatically and effortlessly (Fajen 2007).

Based on this analysis of the core features of AFFORDANCE FOR ACTION, we suggest defining affordances as follows.

**AFFORDANCE FOR ACTION:** Affordances are perceived opportunities for action that depend on complementary action-dispositions of a subject and an object, space, or layout. Affordances control action performance at different levels and stages.

In the next paragraph, we show how AFFECTIVE AFFORDANCE accommodates and revises some features of AFFORDANCE FOR ACTION to explain cases in which certain objects or spaces afford affective phenomena and processes, including emotion regulation.

## 2.2 Affective Affordances

Krueger and Colombetti use AFFECTIVE AFFORDANCE within their research on *situated affectivity* (Krueger and Colombetti 2018). Situated affectivity is a broad philosophical project aimed at explaining human affectivity (e.g., emotions, moods, and feelings) as a phenomenon or process that relies heavily and consistently on external 'tools for feeling', i.e., aspects or items of our material, social, and cultural environment (Griffiths & Scarantino 2005; Stephan and Walter 2020). Krueger and Colombetti's AFFECTIVE

<sup>2</sup> We thank an anonymous reviewer for suggesting clarifying this point.

AFFORDANCE is an important conceptual tool in this project. It aims to accommodate the fact that, in our everyday interaction with the environment, “[w]e perceive people, places, and things as affording regulative opportunities to amplify, suppress, extend, enrich, and explore the phenomenal and temporal character of our affective experiences” (Krueger and Colombetti 2018: 224).

Affective affordances can be instantiated by many things. Probably needless to say, human beings can be seen as instantiating affective affordances whenever their appearance – behaviors, words, gestures, expressions – offers a handhold for affective interaction. More broadly, animated beings, thus including non-human animals, can instantiate affective affordances thanks to their movements, actions, and behavioral manifestations. What is particularly interesting however, is that according to Krueger and Colombetti, spaces and inanimate objects (both natural and artifactual) afford affective relations as well. In this paper, we set aside affective affordances instantiated by animated beings: although they are likely to share many features with those instantiated by inanimate beings, we suspect that they require a special treatment. Moreover, as will become clearer later on, inanimate objects offer an especially challenging case in that they instantiate affective affordances without feeling, and therefore manifesting, affective states.<sup>3</sup>

In what follows, we show how Krueger and Colombetti’s AFFECTIVE AFFORDANCE elaborates on and extends the concept of AFFORDANCE FOR ACTION to explain the situated character of human affectivity. AFFECTIVE AFFORDANCE has three core features: (1) Complementary affective dispositions, (2) Perceptual detection, and (3) Affective regulation.<sup>4</sup>

### (1) Complementary affective dispositions

Affective affordances require complementary affective dispositions involving a person with certain affective abilities

<sup>3</sup> In addition, we believe that testing affective affordances instantiated by animated beings, and in particular by persons, would require different experimental procedures. For example, testing how expressive properties of human faces or expressive movements might instantiate affective affordances would require important preliminary steps, like testing implicit biases about race, gender, age, disability status, etc. Some have suggested, instead, that affective affordances of objects can be tested through pure kinematic analysis (Caravà and Scorolli 2020). This experimental procedure would probably not suffice to investigate affective affordances instantiated by persons. Since we aim to provide a concept that is, at least in principle, empirically testable, we prefer focussing only on the case of objects and spaces and discuss affective affordances instantiated by persons, including their relationship with social affordances, in future work.

<sup>4</sup> Our reconstruction combines the core conceptual aspects of Krueger and Colombetti’s proposal (2018) with additional theoretical and experimental works on affordances and affectivity. The terminology we use is consistent with the broader context of these works but does not always overlap with Krueger and Colombetti’s one.

and preferences and an object or space with certain material, cultural, and symbolic properties. For example, Krueger and Colombetti suggest that one may seek emotional comfort in a glass of Belgian beer (Krueger and Colombetti 2018: 224). Now, for a person who likes Belgian beer, such a glass affords opportunities to undergo certain affective states and experiences, such as having a soothing experience. Belgian beer can for sure instantiate these affective experiences by virtue of its chemical-material properties, e.g., alcohol and how it interacts with the human body. However, in practice, it does so only if one likes Belgian beer, i.e., if they have a preference for or an affective tendency towards this type of beer, or at least for beer in general.

As in the case of AFFORDANCE FOR ACTION, AFFECTIVE AFFORDANCE requires a match between the dispositions of a subject and an object or space. The subject should be disposed to undergo certain affective experiences based on their embodied possibilities (e.g., being able to be affected by certain chemical and material properties), the culture in which they grew up or currently inhabit, and their affective relation with certain objects or spaces, e.g., liking or regularly using them to elicit certain affective states or processes (Caravà and Scorolli 2020). In turn, the object or space should be disposed to elicit certain affective reactions based on a cluster of properties.<sup>5</sup> These include low-level properties, such as shape, color and dynamic properties (Bar and Neta 2006; Cespedes-Guevara and Eerola 2018; Lebrecht, Bar, Feldman Barrett, et al., 2012; Pavlova et al. 2005; Zadra and Clore 2011), and high-level properties, such as cultural and symbolic meanings and the practices in which some objects or spaces are used either idiosyncratically by an individual or in intersubjective contexts, i.e., within a culture or social group (Caravà and Scorolli 2020; Colombetti and Roberts 2015; Coninx and Stephan 2021).

### (2) Perceptual detection

Affective affordances are detectable through perception. This feature is built in Krueger and Colombetti’s definition of AFFECTIVE AFFORDANCE as the perception of objects

<sup>5</sup> Not every property of the cluster needs to be possessed by the object or space for this object or space to instantiate an affective disposition. Moreover, different properties of the cluster may influence each other and interact dynamically. For example, think about the grains of a rosary made of marble. Marble is a smooth material that affords certain hand movements. It is likely that marble was selected as one of the most common materials for rosaries because it is functional to embody aspects of the religious practice in question, i.e., accommodating the rhythm of prayer by manipulating the rosary. In turn, the fact that Christians often use rosaries made of marble when they pray affects the disposition of rosaries to elicit certain affective experience. Indeed, it has contributed to creating associations between marble and symbolic meanings, which loop into the marble’s disposition to elicit certain affective experiences in religious practices.

and spaces as affording emotional regulative opportunities (Krueger and Colombetti 2018: 224). Krueger and Colombetti are not explicit on how objects and spaces instantiate *perceivable* affective affordances. However, they provide a series of examples that suggest that the perception of affective affordances is multimodal. For instance, they mention wearing power-suits to boost one's self-confidence (Krueger and Colombetti 2018: 225), which suggests that affective affordances can be conveyed through vision and touch. Or again, they mention drinking Belgian beer to elicit a soothing experience (Krueger and Colombetti 2018: 224), which suggests that affective affordances can be conveyed through smell and taste. Moreover, they provide several examples of affective experiences instantiated by music (Krueger and Colombetti 2018: 224, 226, 227, 242), which suggests that affective affordances can be heard.<sup>6</sup>

Thus, as in the case of AFFORDANCE FOR ACTION, the appropriate level of analysis for AFFECTIVE AFFORDANCE is perception in general, not only visual perception.

### (3) Affective regulation

Krueger and Colombetti use AFFECTIVE AFFORDANCE to explain the situated aspects of human emotion regulation: the fact that more than often we rely on extra-bodily resources to “[a]mplify, suppress, extend, enrich, and explore the phenomenal and temporal character of our affective experiences” (Krueger and Colombetti 2018: 224). Here we use ‘affective regulation’ instead of ‘emotion regulation’ to accommodate the fact that, in Krueger and Colombetti's account, extra-bodily resources do not play a role only in the regulation of what philosophers technically call ‘emotions’ (e.g., joy, anger, sadness, shame, or guilt), but also in the regulation of moods (e.g., grumpiness, irritability, anxiety, depression, and melancholy), and feelings (e.g., feelings of comfort, feelings of calm, and tiredness).<sup>7</sup> ‘Affective’ and ‘affectivity’ encompass this variety of phenomena and processes (Colombetti 2014). Moreover, in Krueger and Colombetti's account, ‘affectivity’ refers to multi-dimensional phenomena and processes. ‘Affectivity’ includes bodily processes, such as “[c]hanges in autonomic nervous system activities, behavioral expression [...], states of action readiness [...], evaluations or appraisals, and a subjective or experiential dimension” (Krueger and Colombetti 2018:

226). ‘Affective’ and ‘affectivity’ also refer to these multi-dimensional features.

Still, in their discussion of affective affordances, Krueger and Colombetti mostly focus on *felt* aspects of affectivity. First, they identify the regulatory effects of objects and spaces in the phenomenal and temporal character of affectivity, roughly its conscious, experiential, and phenomenological aspects (Krueger and Colombetti 2018: 224). Second, most of the examples they provide support the idea that affective affordances serve to regulate felt emotions. For instance, they discuss how humans engineer their environment to elicit and maintain affective experiences or to “[e]voke and regulate specific feelings” (Krueger and Colombetti 2018: 225). And again, they explain how our interaction with objects and spaces modifies our bodily-affective style, which in turn allows us to feel certain emotions (Krueger and Colombetti 2018: 229). Third, their analysis of disturbances in affective regulation in clinical depression and schizophrenia suggests that the relevant level of discussion is that of felt emotions and their phenomenology. By arguing that, in these cases, subjects “[e]xperientially inhabit” a disturbed landscape of affective affordances, which affords an altered overall phenomenological structure of their affective experience (Krueger and Colombetti 2018: 230–234), they restrict their scope to the phenomenological aspects of regulation of felt emotions and affective experiences.

Based on our analysis of the core features of affective affordances, we thus suggest summarizing Krueger and Colombetti's concept of AFFECTIVE AFFORDANCE as follows.

**AFFECTIVE AFFORDANCE:** Affective affordances are perceived opportunities for affective regulation that depend on complementary affective-dispositions of a subject and of an object or space and regulate human affectivity at the personal level. They regulate felt emotions and affective experiences, in particular their phenomenological aspects.

## 3 Affective Affordances and Affective Regulation

Krueger and Colombetti's AFFECTIVE AFFORDANCE is a useful concept. Along with the notion of ‘affective scaffold’ (Colombetti and Krueger 2015), it is one of the first attempts to systematize an important aspect of human affectivity: the fact that it is heavily and consistently influenced by the material world we inhabit. Importantly, it does so by elaborating on an established concept, i.e., AFFORDANCE FOR ACTION, which is empirically testable. Thus, it opens up fruitful opportunities for the empirical testing of the situated approach to affectivity (Carvalho 2022). Moreover, it has served to make progress towards a unitary conceptualization of affective regulation as including external resources like

<sup>6</sup> For more examples of how music can convey affective affordances see Krueger (2014).

<sup>7</sup> There are many taxonomies of affectivity, which rely on different classificatory criteria. In this paper, we remain neutral as to which one best accounts for the manifold nature of our affective lives. See Zinck and Newen (2008) for an exemplary taxonomy distinguishing between emotions, moods, and feelings.

objects and spaces, which is an important but underexplored topic in psychology (Caravà and Scorolli 2020; Koole and Veenstra 2015; Schutte, Malouff, Price, et al., 2008).

Nonetheless, although Krueger and Colombetti's account of affectivity is broad and includes sub-personal and pre-conscious processes like in standard componential approaches to emotions (Krueger and Colombetti 2018: 226; Newen et al. 2015; Scherer 2009), the concept of AFFECTIVE AFFORDANCE it relies on does not cover all these aspects. Rather, it explains only those cases in which environmental resources play a role in affectivity by eliciting, changing, or maintaining felt affective states. Considering that AFFECTIVE AFFORDANCE is supposed to contribute to the debate on situated affectivity by explaining affective processes and states as heavily and consistently influenced by the material world, this is problematic. By accounting only for a relatively small set of cases, this concept does not do the wide explanatory job it is supposed to do.

Yet, in response to our worry, one may claim that this is not a real problem: even if this set of cases is small, it is the most relevant one. The argument behind this response is as follows.

**P1** Intuitively, emotions are what we feel: they are felt affective states.

**P2** Affective regulation is the regulation of these states.

**P3** AFFECTIVE AFFORDANCE is supposed to explain how objects and spaces contribute to affective regulation.

**P4** Krueger and Colombetti's AFFECTIVE AFFORDANCE explains how objects and spaces regulate felt affective states.

**C** Therefore, Krueger and Colombetti's AFFECTIVE AFFORDANCE maps onto the right set of cases: the concept is not problematic.

However, this response to our worry is ill-conceived. First, Krueger and Colombetti endorse a multi-componential approach to emotions (Krueger and Colombetti 2018: 226). Therefore, a restrictive notion of emotions like the one presented in **P1** is not consistent with their account. Second, **P2** presents a misleading notion of affective regulation, which is not totally consistent with the notion of affective regulation usually endorsed in psychology. According to this notion, affective regulation refers to the conscious or unconscious "[w]ays individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross 1999a: 542). Since emotions are multi-componential, affective regulation may target *one or*

*more* emotion components: behavioral, i.e., action tendencies and expressions, experiential, i.e., what we feel and how we feel it, and physiological, i.e., embodied processes such as, e.g., heart rate and neural activations (Gross 1999a: 542). Although affective regulation can involve changes in the subjective experience of affective states, it need not necessarily involve them (Gross 1999b: 557). Therefore, claiming that Krueger and Colombetti's AFFECTIVE AFFORDANCE maps onto the most relevant set of cases, and thus arguing that it is not a problematic concept, is a mistake: indeed, **P2** is inaccurate.

If our take on this response to our worry is correct, and if the stake of AFFECTIVE AFFORDANCE is to provide a significant contribution to the project of situated affectivity, then this concept needs to be revised in order to accommodate a wider set of cases. This set of cases must include instances in which objects or spaces do not or do not necessarily involve the regulation of felt affective states, and still, contribute to affective regulation. These cases are less intuitive than those in which extra-bodily resources contribute to the regulation of felt affective states. Still, they are more common than we may think. In the next section, we consider a paradigmatic example of these cases: how we perceive the expressive properties of objects and spaces. We explain why these cases count as cases of affective regulation in which felt emotions are not involved and, based on our analysis of these cases, we propose a revised concept of AFFECTIVE AFFORDANCE.

## 4 Expressive Experiences and Affective Affordances

In this section, we introduce EXPRESSIVE EXPERIENCES as they are addressed in the contemporary debate in philosophy of perception. We argue that, in spite of their peculiarities, expressive experiences are first and foremost perceptual experiences instantiating perceptual properties, i.e., EXPRESSIVE PROPERTIES: experiences that do not necessarily elicit affective arousal (§ 4.1). This discussion allows us to identify one relevant instance of affective regulation that does not necessarily entail the presence of felt emotions and to revise the concept of AFFECTIVE AFFORDANCE as to include these cases (§ 4.2).

### 4.1 Expressive Experiences and Affective Arousal

EXPRESSIVE PROPERTIES are commonly understood as those properties one is in contact with when experiencing an object as expressive of some psychological or, more broadly, affective state. These properties characterize human emotional manifestations but also objects' appearances: a piece of music

can be described as sad, a landscape as happy, a shade of color as cheerful. The multifaceted phenomenon of expressiveness has been addressed both in philosophy – especially in the domain of aesthetics – and in psychology (Benenti 2020). Let us call the experiences in which expressive properties are instantiated EXPRESSIVE EXPERIENCES. Most philosophers and psychologists agree that EXPRESSIVE EXPERIENCES can be accounted for in perceptual terms: we *see* desolate landscapes and *hear* mournful songs. Still, there are at least three reasons why EXPRESSIVE EXPERIENCES are typically considered *sui generis* perceptual experiences.

First, their phenomenology seems to depend on the perceiving subject way more than standard perceptual experiences of colors, sounds, and shapes. It is easy to figure out a situation in which two subjects disagree on the expressive character of two shades of colors among which they have to choose to paint a room. Each of them might insist that, in their view, one of the two shades is more peaceful or relaxing than the other. And it is not hard to imagine that, similarly to what happens with aesthetic preferences, the disagreement might remain unsettled. Second, it seems possible to intentionally neglect expressive features. Consider the case in which a musician is so focused on the correctness of their execution that they do not pay attention to the expressive qualities of the piece. Third, EXPRESSIVE EXPERIENCES entertain some relation with emotions or, more broadly, with affects. They attract philosophical and psychological interest precisely because they have to do with emotions, and in particular with the expression of emotions. Yet they are about objects that do not have a psychic life, such as artworks, landscapes, furniture, spaces.

To account for these specificities, several proposals have been put forward, each leveraging one or more important components of EXPRESSIVE EXPERIENCES. To mention some, upholders of arousalist explanations insist that we ascribe to objects those same (or similar) affective states that such objects trigger in us (Matravers 1998; Ridley 1995; Robinson 2005). Projectivist approaches typically suggest that the experiencer projects onto objects affective states that might be those aroused in the subject at the time of the experiences, or the emotions such objects elicited in the subject in the past (Wollheim 1993). Or else, they could be the emotions that the subjects imagine as having guided the (actual or imagined) realization of the objects (Noordhof 2008; Levinson 1990, 1996; Walton 1999). Finally, perceptualist theories argue that what subjects do is to detect perceptual saliences that expressive objects share with expressive people (Benenti and Meini 2017; Boghossian 2007; Lopes 2005; Davies 1994, 2005; Kivy 1980, 2002).

All these theories share – overtly or covertly – the view that we perceive expressive properties. However, most of them struggle to account for the affective component of the

experience: they disagree on whether subjects have to be aroused in order to undergo expressive experiences. While arousalism accounts for the intuition that, in order to have an expressive experience one has to feel something, and not only to perceive it, critics retort that this is not the only, nor the paradigmatic example of expressive experience (Wollheim 1993). As a matter of fact, we could recognize that the room we just entered is lugubrious without feeling any particular affective state. We might simply detect its cheerlessness while remaining affectively neutral. Or think about Richard Wagner's *Ride of the Valkyries*. When ascribing an expressive character to the piece, one can be deeply moved to exaltation or anxiety, but one could also go through the piece without having any emotional reactions.

A more convincing explanatory link between EXPRESSIVE EXPERIENCES and emotions is provided by theories grounded in perception and imagination. According to contour theories, for example, subjects perceive objects as expressive of affective states in virtue of their resemblance to expressive behaviors (Kivy 2002; Davies 2005; Meini & Benenti 2017). In addition, accounts that appeal to imagination reinforce the idea that EXPRESSIVE EXPERIENCE is first and foremost a perceptual experience that triggers imaginative engagement such that objects and their features appear to us as significantly connected to the emotional domain. Just to give an example, the 'persona theory' proposed by Jerrold Levinson explains our experience of expressive music via an imaginative process that makes us hear the music *as if* it were the behavioral emotional expression of a fictional character (Levinson 1990, 1996).

Ascribing a major role to perceptual mechanisms does not force us to rule out other cognitive interventions that might explain the complexity of expressive experiences. For example, the perceptual detection of shapes, colors, edges, and auditory features like pitch and rhythm is likely to mobilize contextual and culture-dependent beliefs about certain objects and spaces (e.g., whether listening to Christmas songs in August is ridiculous or rather fun), the conceptual ability to make covert or overt affective ascriptions (e.g., 'this is sad'), the intervention of occurrent emotions and moods, episodic memory (e.g., recalling past events in which our encounter with certain objects or spaces made us feel in a certain way), and imagination (e.g., imagining certain expressive objects such as artworks as being the product of creative processes resulting in those perceivable patterns).

Regardless of the specific account one may want to endorse, the fact that perception-based and imagination-based explanations do without affective arousal does justice to the phenomenological remark that we do not need to feel aroused every time we recognize a perceptual stimulus as expressive of an affective state. Therefore, it seems

reasonable to argue that emotions and affective states enter the picture of EXPRESSIVE EXPERIENCE not much in virtue of what subjects feel when they undergo these experiences, but thanks to their perceivable profiles.

One broadly shared characterization of these profiles has them as perceptual patterns that we paradigmatically detect in expressive persons, but that can also be instantiated by objects and spaces. For example, “[t]he sharply rising horn arpeggio at the climax of the slow movement of Brahms’s Horn Trio [...] sounds like a cry of anguish”, or “[t]he musical movements of the marcia funebre resemble the movements of someone resolute but heavy of heart” (Ridley 1995: 49). Similarly, we can describe visual patterns of static images as pointing towards a certain direction, towards the ground, like a bowed-down posture typical of a weary attitude, of someone lacking energy for action; or pointing upwards, as someone who is animated by hope. Analogously, colors can be seen as exploding, or as pouring out of the (e.g., pictorial) surface, like typically enthusiastic behaviors, whereas others seem to be attracted toward the center of the surface, reminding of introverted attitudes.<sup>8</sup>

Arguments in favor of the view that the sub-personal mechanisms recruited for such perceptual recognition are primarily perceptual come from the cognitive sciences of emotions. For one, all current psychological theories of emotions assume that, given the evolutionary relevance of emotions ascriptions, human and some non-human animals are equipped with the capacity to immediately perceive affective expressions. Relying on the plausibility of this general assumption, philosophers tend to converge on the perceptual nature of expressions ascriptions (Gallagher 2008; Krueger and Overgaard 2012; Smortchkova, 2017; Zahavi 2011). Moreover, experimental studies have shown that children on the autistic spectrum, who are typically impaired in processing affective information within social and intersubjective contexts, are as efficient as neurotypical children in matching musical fragments with stereotypical representations of happy and sad faces (Heaton et al. 1999; Quintin et al. 2011; Sivathanan et al. 2023). This suggests that some perceptual abilities must be in place in the recognition of expressive properties of musical gestures, abilities that do not necessarily appeal to felt emotions.

In light of the just outlined debate, we can thus define EXPRESSIVE PROPERTIES as those perceivable features that certain objects or spaces share with typical emotional expressions of animated beings.

<sup>8</sup> We do not take sides as to whether expressive profiles of objects require one to detect similarities between them and human expressive patterns. However, it is worth mentioning that, while resemblance theories of expressiveness have problems accounting for things like colors, sounds, and spaces, those that avoid the appeal to resemblances promise to overcome these difficulties (Ravasio 2017; Benenti 2020).

## 4.2 Affective Affordance: Revising the Concept

Before we go back to AFFECTIVE AFFORDANCES and see how the phenomenon of expressiveness influences their definition, some considerations on how expressive properties interact with affective regulation are in order.

EXPRESSIVE EXPERIENCE encompasses the perceptual recognition of expressive profiles that constitute extra-bodily resources that we often exploit to *regulate our affective states* and processes. Based on the perceptual recognition of expressive properties, we detect certain objects or spaces as capable of having an impact on our own (and sometimes others’) affective experiences. We may choose a certain color to paint a room, a certain furniture arrangement, or a certain lighting, based on the fact that we recognize those perceivable properties as those potentially capable of modifying, preserving, enhancing, controlling our affective tone or behaviors. Similarly, we may want to listen to a certain piece of music rather than another because its contour (its ‘melismatic’ profile (Ridley 1995)) seems able to make us feel better. Or we may decide to avoid visiting the exhibition of an artist whose works have the tendency to make us feel anxious or uncomfortable.

In all these cases, the selection of the objects or spaces we want – or do not want – to experience presupposes our capacity to perceptually recognize the expressive features they instantiate. In principle, such a detection process does not require us to feel any affective state. We do not need to feel the affective modification triggered by the room’s chromatic shades, nor to be aroused by the piece of music in order to ascribe them features that can regulate our affective states and processes. Yet, in seizing their expressive features, we are already engaging in a process of affective regulation. More specifically, we not only engage in ‘situation selection’ – i.e., we approach or avoid stimuli based on their ‘likely emotional impact’ (Gross 1999b: 559) – but we also exploit expressive properties in order to change the emotional situations we are in, like when we change a musical playlist to make a long road trip more pleasant. In addition, expressive properties lend themselves to be the focus of our attentional deployment, which is another way they can channel our affective states. We can, for instance, focus on the gentle slopes of the hills outside our window to regain serenity, or rather linger over the fast-paced rhythm of a piece of music so as to recover from melancholy. In principle, none of these processes requires us to feel an emotion *prior to* the perceptual detection of expressive properties. Therefore, EXPRESSIVE PROPERTIES can be considered as part of processes of affective regulation and in particular as constitutive of certain affective affordances: they are those properties whose perceptual detection can give rise to the emergence of an affective affordance.



Let us now go back to the features of AFFECTIVE AFFORDANCE so as to locate expressive properties more precisely within the provided explanatory framework.

### (1) Complementary affective dispositions

As we have seen, affective affordances require complementary affective dispositions involving a person with certain affective abilities and an object or space with certain material, cultural, and symbolic properties. Considered from this perspective, EXPRESSIVE PROPERTIES are material properties that can be perceptually detected as expressive of affective states by a subject with certain perceptual abilities. Such abilities amount to the capacity to recognize saliences – profiles, contours, features – that objects or spaces share with human (and, more broadly, animated) beings who express their own emotions. The perceptual recognition of these properties can initiate and guide processes of affective regulation. Subjects involved in such processes are equipped with the affective abilities that, by definition, are required to seize affective affordances.

### (2) Perceptual detection

We have presented reasons for believing that, from a phenomenological, first-personal perspective, expressive properties are perceived. Moreover, we have pointed at widespread assumptions and shared evidence concerning perceptual mechanisms that underlie the recognition of human expressions. Accepting these general claims and the related findings allows us to argue that expressive properties are perceived, rather than, or prior to, being imagined, remembered, or felt.<sup>9</sup> As such, they constitute the perceptual

<sup>9</sup> This follows from our endorsement of a perceptualist account of expressive properties. We want to note that, in addition to benefits of such an account we have considered in § 4.1, this allows us to avoid an important objection against accounts of expressive properties and affective affordances based on arousalist and projectivist approaches. The objection is as follows. **P1**: According to the ecological approach to perception, we directly perceive affordances because the environment provides us with enough information for such an action-oriented perception. **P2**: A successful account affective affordances must mimic this feature of affordance perception and claim that the environment provides us with enough information for affect-laden perception. **P3**: Arousalist and projectivist accounts assume that the detection of expressive properties requires the agent to ascribe or project affective states onto objects and spaces. **P4**: Arousalist and projectivist accounts covertly imply that the environment is not informationally rich enough to be directly perceived as expressive of affective states. **C**: A description of expressive properties in affective affordances based on arousalist and projectivist accounts fails to meet an important requirement of the ecological approach perception (**P1**). Hence, this project fails. Since we reject the idea that we need to project or feel certain affective states in order to perceive affective affordances, our account does not face the problem in **P4**. Hence, objections based on the covert appeal to enrichment theories

anchor of affective affordances, which accordingly emerge from the detection of expressive properties by a subject with the adequate perceptual and affective abilities.

### (3) Affective regulation

What is left to clarify is the precise relation between expressive properties, affective regulation, and affective affordances. Given our endorsement of perceptualist accounts of expressive experiences, we insist that emotions contribute to the emergence of affective affordances of objects and spaces thanks to their expressive profiles. Expressive profiles are paradigmatically linked to felt and expressed affective states. However, such profiles are instantiated without requiring any feelings: in this sense, they are ‘affectively silent’. Despite this, they partake in processes of affective regulation in important ways: they influence situation selection, situation change, and attentional deployment. Moreover, they are likely to influence affective tendencies and behaviors and sub-personal processes typically associated with affective experiences, such as neural activations (Russell 2003; Cespedes-Guevara and Eerola 2018). Thus, we suggest that expressive properties can function themselves as affective affordances, even if they do not necessarily instantiate or modify felt affective states.

Our view might raise two worries. First, one might worry that expressive properties anchor affective affordances only if they are perceived as opportunities for regulating, if not current, at least future felt emotions. If that was true, then our proposal would not add that much to Krueger and Colombetti’s proposal. As a response to this worry, we want to emphasize that our perceptual engagement with expressive properties *can* arouse or modify our current or future affective states. However, expressive properties do not anchor affective affordances in virtue of their impact on felt emotions, be they current or future. In some cases, they do or will have such an impact. In other cases, they do not or will not. Still, provided that their perception partakes in processes such as situation selection, situation change, and attentional deployment, expressive properties can anchor affective affordances. As seen above, these are components of affective regulation. From this, it follows that felt emotions are not a necessary requirement for the emergence of affective affordances.

Second, one might worry that, since we emphasize non-felt components of affective states, our view entails that one *always* needs to perceive objects and spaces as affording opportunities to regulate sub-personal, i.e., neural, states associated with emotions. We want to make clear that our proposal does not entail this counterintuitive claim. There

of perception do not apply to our proposal. We are grateful to an anonymous reviewer for pushing us to discuss this point.

might be cases in which one engages in this type of perceptual dynamic. For example, think about a pink box of antidepressants. Coupled with the subject's background knowledge of how antidepressants regulate neural states, the pink box might be perceived as an opportunity to regulate neural states associated with certain moods. Yet, in many other cases, the subject does not detect these opportunities for sub-personal affective regulation. This is not a problem for our argument, though. While we believe that emotions encompass several unconscious components, when we refer to 'unfelt components' that partake in the process of affective regulation we primarily refer to perceptual saliences that do not need to recruit felt emotions in order to be perceived as expressive of emotions. When these perceptual saliences partake in processes of affective regulation as described in § 3, they play a role in affective processes, i.e., affective regulation. Which is why they function as affective affordances.<sup>10</sup>

We suggest that these considerations about expressive properties, affective affordances, and affective regulation should solicit us to revise the concept of *AFFECTIVE AFFORDANCE* we presented in § 2.2. This revised concept is meant to account for the role of objects and spaces in processes of affective regulation in which some affective component is regulated, but this component need not necessarily be a felt affective state. Let us call this revised concept *AFFECTIVE AFFORDANCE\**.

**AFFECTIVE AFFORDANCE\*:** Affective affordances are perceived opportunities for affective regulation that depend on complementary affective-dispositions of a subject and of an object or space and regulate human affectivity. They can –but do not need to– regulate felt emotions and conscious affective experiences, including their phenomenological aspects. They do so not only by eliciting affective reactions, but also by featuring in perceptual experiences as expressive properties of objects or spaces. They are constitutive of strategies of affective regulation and regulate affective components such as emotion recognition, affective tendencies and behaviors, and sub-personal processes associated with affective experiences.

*AFFECTIVE AFFORDANCE\** is more minimal than Colombetti and Krueger's *AFFECTIVE AFFORDANCE*. But, exactly because it is so minimal, it can account for a wider variety of cases in which we rely on extra-bodily resources to regulate our affective states, processes, and behaviors: by eschewing felt affective states as a necessary condition, it explains more with less.

This concept proves particularly helpful if we contextualize it in the broader project of situated affectivity. If the aim of this project is to account for the many ways in which our affective states and processes (e.g., emotions, moods, and

feelings) are shaped by our interaction with the environment and its material resources, being able to account for these many and varied cases with one single concept is a desirable thing. It is a step forward with respect to Krueger and Colombetti's concept, for it accounts for more cases. Moreover, our concept of *AFFECTIVE AFFORDANCE\** accounts for an important way in which, in multi-layered and temporally extended affective experiences, our minimal affective relation with certain objects and spaces (a relation that recruits affective components but not felt affective states) can anchor phenomenologically rich affective experiences, namely paradigmatic affective experiences involving felt emotions. Thus, it does not leave this important aspect of our affective lives unexplained but better explains it.

## 5 Conclusions

Our interaction with the material environment affords many things to us: opportunities for performing embodied, mental, and social actions, as well as opportunities to regulate our affective states and processes. With respect to the latter, the extant philosophical literature has mostly focused on cases in which we rely on material objects and spaces to regulate felt affective states. These cases are intuitive and common. Still, they are not the only cases in which objects and spaces come in handy in processes of affective regulation. Indeed, many times we engage with objects and spaces for the purposes of affective regulation, this engagement regulates some affective component, but does not elicit nor change our own felt affective states.

We have considered a class of cases in which this happens: cases of affective regulation that rely on the expressive properties of objects and spaces. We have claimed that these cases should solicit us to revise an important concept that has been coined to account for situated aspects of affective regulation: that of *AFFECTIVE AFFORDANCE*. By focusing on felt aspects of affectivity, this concept leaves unexplained cases in which the world matters for our affective processes but not because it elicits or modifies felt affective states. We have thus proposed a more minimal concept, that of *AFFECTIVE AFFORDANCE\**, in which felt affective states are not central. By doing so, we have provided a possible way to account for a wide variety of cases in which we rely on extra-bodily resources to regulate our affective processes, thus giving more explanatory breadth to an affordance-based approach to situated affectivity.

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**Authorship Declaration** The authors have contributed to the conceptualization, writing, and revision process equally. However, Marta Caravà particularly focused on § 1, § 2, § 3, and § 5, while Marta Benenti is especially responsible for § 4.

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