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Where and How Do Phronesis and Emotions Connect?

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Abstract
We aim to map out the points of confluence between phronesis and emotion, as well as the nature of this confluence. We do so based on philosophical and psychological explanations of emotions and phronesis. Making sound decisions, which requires phronesis, is an important matter, but its relationship with emotions has only just begun to be studied. We propose that the interplay between phronesis and emotion is possible (rather than inevitable) because both have a cognitive-behavioural structure and because emotions are hierarchical. In the case of emotion, there are no gaps between the cognitive and behavioural dimensions, while phronetic acts can only manifest if cognitive and behavioural aspects are activated simultaneously. The confluence we identify is bidirectional and involves mutual enrichment in this dual dimension. On the one hand, phronesis enriches emotion because it involves extra subjective knowledge and allows emotion to be directed towards higher goals. On the other hand, emotions enrich phronesis because phronesis makes decisions based on sensitive preferences and because emotions confirm correctness in the context of moral decision making. Methodologically, this study is theoretical and interdisciplinary, as our approach is both philosophical and psychological. Philosophy helps us to improve the conceptual foundation of the construct, while psychology provides an analysis of the emotional process, allowing philosophy to understand how emotional evaluation-assessment and motivation lead to decision making.

Keywords Emotion · Phronesis · Psychology · Philosophy · Ethics · Moral action

1 Introduction

Both philosophers and psychologists have reflected on sound decision making, which is an important area of concern. In philosophy, the various ways in which sound decision making has been conceptualized include: exercising virtue to achieve *eudaimonia* (Aristotle), seeking good through fulfilment of duty (Kant), obtaining success through will (Nietzsche) and attaining human flourishing through living one's life according to particular values (Scheler). Psychologists, on the other hand, have attempted to explain human actions via, for instance, behaviourist theory (Skinner 1974), motivation theory (Maslow 1943), personality studies (Allport 1955) and a consideration of the relationship between decisions and the meaning of life (Frankl 2015). The continued interest psychology research has taken in sound decision making in the twenty-first century is evidenced by the recent literature on *phronesis* or *practical wisdom,* in which ongoing attempts are being made to design a psychological construct that allows phronesis to be measured and taught (Kristjánsson et al. 2021; Kristjánsson and Fowers 2024). Philosophy's and psychology's recent engagement with phronesis has led some to note a "robust interdisciplinary dialogue of moral psychologists and philosophers" (Lapsley 2021, p. 319).

Another ongoing theme of interest among philosophers and psychologists is the relationship between virtues and emotions, one example of this being scholars' focus on moral emotions (Tangney et al. 2007; Nussbaum 2008; Kristjánsson 2018a). However, to the best of our knowledge, there are very few works that explore the links between phronesis and emotions (Michel 2013; Svenaeus 2014), and of these, only two study this matter directly

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(Kristjánsson 2023;[1] Kristjánsson and Fowers 2024). Therefore, in this article we offer a tentative exploration of this topic. Specifically, we aim to answer the following questions: Where within the structures of phronesis and emotion are the points of confluence between the two located? What are the characteristics of the confluence between them, and what does it contribute respectively to phronesis and emotion?

To answer these questions, we will adopt both philosophical and psychological perspectives on phronesis and emotion, and we will also take certain contributions from neuropsychology into account. Proposing that emotion precedes, accompanies or follows phronesis, we aim to explain where confluence between phronesis and emotion *can arise* and *what the characteristics* of this confluence may be. We consider this confluence to be a *possibility* rather than a certainty because emotion does not necessarily lead to virtuous action, just as possessing virtues does not ensure that a person exclusively makes sound decisions (Miller 2014). Therefore, we do not assume that emotional-psychological and prudential-philosophical processes invariably lead to phronetic actions (i.e., sound/right decisions), because there will always be a gap between emotion and phronesis. For this reason, the argument we set out characterizes the confluence between emotions and phronesis as possible and beneficial.

We begin our study by clarifying what phronesis (Sect. 2) and emotion (Sect. 3) are according to philosophical and psychological perspectives. We then address *where and how* the confluence and connection between them come about (Sect. 4.1). Lastly, we explain how, within the confluence between them, emotions can be enriched by phronesis, and vice versa, when emotions are properly integrated into the dynamics of the human psyche (Sect. 4.2).

From a methodological standpoint, our study is theoretical and interdisciplinary in nature. Insights about phronesis from philosophy can expand and conceptually support the psychology literature's constructs and empirical studies, and they can also help psychology to understand the specificity and potential of different levels of both knowledge (including intellectual knowledge) and human inclinations, tendencies and behaviours (including voluntary decisions). On the other hand, psychology facilitates an empirically based analysis of the emotional process, allowing philosophers to better understand emotions and even the emotional basis of virtue.

[1] This article by Kristján Kristjánsson considers the relationship between phronesis and emotions; Prof. Kristjánsson was kind enough to send us a draft of it after we had a virtual conversation with him, which greatly benefited our work on this article. We are very grateful to Prof. Kristjánsson for his generosity in sharing his draft and the interesting questions and suggestions he put to us.

2 Phronesis in Philosophy and Psychology

To better convey the original meaning of phronesis, in this article the terms *phronesis* and *practical wisdom* are used interchangeably and in lieu of *prudence*, whose meaning has largely been reduced to that which it has in everyday language.[2] This terminological choice is consistent with the approach taken in various recent philosophy (Kristjánsson et al. 2021; De Caro and Vaccarezza 2021) and psychology (Darnell et al. 2019, 2022; Berg 2020) studies. To identify the points of confluence between phronesis and emotion and examine their effects, we must first briefly set out what philosophy and psychology have contributed to each of these concepts.

2.1 Phronesis in Philosophy

Several comprehensive reviews of the literature on phronesis have been published in recent years (Narvaez 2008; Kristjánsson 2021; Kristjánsson et al. 2021; Lapsley 2021). Since the literature on practical wisdom is very extensive, we will focus on the portion of it that is relevant to the confluence between phronesis and emotion.

The starting point for our study of practical wisdom is Aristotle, and from there we proceed to the perspectives of Thomas Aquinas and other Aristotelians such as Pieper (2017) and Polo (2015, 2018). In line with these thinkers, we regard phronesis as both an intellectual and moral virtue (Aquino 2014, p. II-II q. 47).

For Aristotle (2018, [1144b]), human actions involve knowledge. Knowledge can concern either an immediate end (immediate effect) or an ultimate end. A virtuous life requires sufficient knowledge of the ultimate end, which is understood as that which gives full meaning to actions. When explaining human behaviours, Aristotle first points out that there are actions that arise from natural inclination; these he calls *natural dispositions* or *natural virtues*. Another set of virtues he invokes is character virtues. Emerging when natural inclinations are developed, character virtues allow us to act with competence, expertise or skill. However, a person who has only character virtues will not take the ultimate end into account when he or she acts. This is because the knowledge that precedes these actions is limited, extending only as far as the immediate product of the action—that is, its specific end. An example in this regard is a worker on a production line, who does not need to know about the company's strategy or exactly how his or her own work fits into the firm's overall productive output.

[2] In everyday English, *prudence* is understood as caution—that is, not taking risks.

Aristotle goes on to describe and explain what full virtue is—that is, virtue imbued with phronesis. To lead a virtuous life, both character virtues and full virtue are necessary (Aristotle 2018, [1144b30-32]). And to attain full virtue, character virtues must be embedded in phronesis. The role of phronesis is *to deliberate* on the means to an end (i.e., a good) that is prefigured by the other virtues and so is a human good. In addition, phronesis orders the ends or goods to which the character virtues are directed, and it does so based on the ultimate end.

Within this arrangement, practical wisdom can resolve conflicts among the goods pursued by the different virtues, meaning phronesis might be described as a *meta-virtue.* For Aristotle and neo-Aristotelians such as Kristjánsson, practical wisdom is "an *intellectual meta-virtue* of holistic, integrative, contextual, practical reflection and adjudication about moral issues leading to moral action"(Kristjánsson et al. 2021, p. 240).

However, although phronesis as a meta-virtue organizes the goods towards which character virtues are directed, it does not cancel them out. This is because, just as higher vital operations do not prevent lower operations from having their purpose (Murillo 2010), phronesis does not cancel out the goods towards which character virtues are directed when it organizes them. Accordingly, and in contrast to Vaccarezza et al. (2023), we take the view that the value of character virtues is intrinsic rather than limited to these virtues' delimiting or demonstrating phronesis's scope of action. This connection of ends is clear in ethics when it is studied from the perspective of human growth. As Polo argues,

> "(…) Tendencies abide by nature, because tending is a defining feature of nature. Nature is a potential operating principle. The better a human being is, the more powerful his or her tendencies will be. However, as I have just mentioned, human perfection occurs in various ways. Human growth is not univocal and it cannot be entirely considered from a single perspective." (Polo 2016b, p. 108).

Identifying phronesis as the only virtue (De Caro and Vaccarezza 2021) therefore fails to take into account the plurality of human tendencies. To be sure, discernment of ends and human flourishing require phronesis, precisely because natural human dynamics are goods oriented, albeit not consistently so. That is, "the analytical consideration [of virtues] is insufficient. Virtues are connected; if they were not (…) the intensification of human tendencies would be inconsistent, with some inclinations colliding with others, and true growth would be impossible" (Polo 2016b, p. 108).

The Jubilee Centre for Character and Virtues[3] has put forward a model of phronesis (Darnell et al. 2019; Kristjánsson et al. 2021) that includes psychological and philosophical contributions. We agree with its understanding of phronesis as a meta-virtue. However, in contrast to the centre's model, we take the view, in line with Aquinas, that phronesis is both an intellectual virtue and a moral one: a *phronimos* is an individual who performs prudent acts, not merely someone who *deliberates and guides* her actions well. Therefore, the principal act of phronesis is *imperium*—that is, applying the result of inquiry and judgment to action (Aquino 2014, II-II [q. 47 8a]). This means that phronesis has two facets: knowledge and action. Moreover, as Pieper (2017) points out, phronesis is about knowing reality to order decisions and actions.

Scrutinizing the Jubilee Centre's model of phronesis (APM) reveals that none of its four components (constitutive, integrative, blueprint, emotional regulation) constitutes moral action. Kristjánsson himself notes that "*after all, phronesis is an intellectual and not a moral virtue*" (2018b, p. 26). Another divergence between our position and the APM is that the latter considers regulated emotion to be an integral part of phronesis, whereas we do not, though we do see an essential relationship between the two.[4] In our view, emotion, rather than being a component of phronesis, is a state that precedes, accompanies or follows acts, including phronetic ones (see Sect. 3.2). Therefore, and as we argue in Sect. 4, for understandable reasons, emotion and phronesis can mutually enrich each other.

One final detail worth noting is that phronesis has links to the so-called moral gap (Blasi 1980; Darnell et al. 2019; Krettenauer 2019). The latter primarily refers to the gap between moral knowledge and moral action—that is, moral judgment is not sufficient to motivate a person to act (Blasi 1980). From our perspective, this gap is closed somewhat if one assumes that phronesis is both a moral and intellectual virtue. However, in our view, although reason and action are intrinsic to phronesis, phronetical acts are the result not of a necessary process but of a possible one, because as human beings we are free.[5]

[3] University of Birmingham. https://research.birmingham.ac.uk/en/organisations/jubilee-centre-for-character-and-virtues

[4] Kristjánsson and Fowers write (2024): "Krettenauer (2019) may be right that, from a structural point of view as well as the point of conceptual parsimony, two of the components identified below might better be seen as preconditions rather than constituents of phronesis, which would leave two essential components only (…) constitutive and integrative ones, (…) Nevertheless, from a pragmatic perspective – as the two 'preconditions' are also necessary for phronesis to function – we include them as components", p. 35.

[5] "If the human being is not superior to his own products, he will not know how to use them" (Polo 2018, p. 40).

The problem of the moral gap therefore manifests in the connection between what a person thinks and what he or she does, but not in the person himself or herself (Spaemann 2008).[6] Precisely because we are free, ethical considerations are part of phronetic acts.

To summarize, we consider phronesis to have two dimensions: cognition and action. We therefore theorize that these two dimensions of phronesis can also be found in emotion, as we explain in Sect. 3. This theory allows us to posit and demonstrate that connection between phronesis and emotion is possible, as well as to describe how it comes about.

2.2 Phronesis in Psychology

The psychology literature approaches phronesis from various perspectives, and there is no uniformity in terms of how it defines or measures the concept. For example, some research considers various elements of Aristotelian phronesis or issues related to it—for instance, the (in)ability to take risks (Kimball 1990; Becker et al. 2021; Jain et al. 2023), mental processes and emotional identification in the context of moral dilemmas (Demaree-Cotton and Kahane 2024), and decision making as well as other executive functions (Breaban et al. 2016) that have additionally been widely examined within studies on moral-reasoning processes (Kohlberg 1981). Other psychology research, by contrast, has described phronesis as a form of wisdom (Staudinger et al. 2005; Grossmann et al. 2020) aimed at elucidating how to make sound decisions and achieve a flourishing life. Peterson and Seligman (2004), meanwhile, speak of *prudence*, describing it as a character strength that is part of the virtue of temperance rather than as a key element of moral acts.

Right across the psychology literature, virtues have been the focus of intense discussion. Most recently, an interesting debate on phronesis as a virtue has emerged, though psychology research that specifically includes the term *phronesis* remains scarce.[7] Fowers (2005) and Schwartz and Sharpe (2010) have stressed the need to create a psychological construct of this virtue. Taking the position that judgement can predict moral action, Candee and Kohlberg (1987) attempt to identify correlations between levels of moral judgement and the behaviours in which individuals engage. Although Ardelt (2004) speaks not of *phronesis* but of *wisdom*, she argues that in order to be wise, an individual needs experience (behaviour), and she advances a construct of wisdom that is primarily cognitive and affective. Studying virtue in general and practical wisdom in particular, Fowers et al. (2021) propose a construct that includes both "the ability to recognise what's most important in a circumstance" and "how to act in the best way in that situation" (p. 121). Lastly, Kristjánsson et al. (2021) offer a construct of practical wisdom that comprises four components that precede moral action.

The two facets of knowledge and action can be discerned in all these constructs.[8] That said, the constructs all place greater emphasis on intellect than the conceptualization of phronesis that we analyse here does. Even in the models of practical wisdom that include emotion, phronesis's motivation-action plays a secondary role relative to its cognitive dimension. Ultimately, these phronesis constructs clearly reflect the need to integrate, in a manner similar to that found in Ardelt (2004) and Kristjánsson et al. (2021), emotions and phronesis. In examining where and how phronesis and emotions connect, we hope to contribute to this endeavour.

3 Emotion: A Multidisciplinary Approach

Emotion has been studied within the biological, behavioural, cognitive and psychoanalytical branches of psychology. And in philosophy, studying human beings has gone hand in hand with studying emotions ever since Aristotle. Our goal here is to clarify the concept of emotion from the philosophical and psychological perspectives, to determine its *structure* and *meaning*, and to bring out the confluences between emotion as a philosophical concept and emotion as a psychological construct. As we will explain, psychology views emotion as both a response and a process, whereas philosophy considers it to be a state, meaning it is not an act but rather something that accompanies acts.

3.1 Psychology of Emotion

Psychology suggests that emotion is a *response* that has three dimensions: cognitive, physiological and behavioural. In the case of human beings, an additional emotional level must be added: the subjective experience and perception of an emotion, which is known as the *feeling of emotions* (Damasio 1994).

If analysed in greater detail, emotion can also be defined as a *process* (Scherer 2023) that encompasses four elements: (1) the external or internal situation (stimuli); (2) processing

[6] If we consider that human beings can always grow, then there is a common ground between moral science and moral education (Sanguineti 2009; Ferrer 2015; Polo 2016b, 2018; Kristjánsson 2020). However, we do not share the position that understands ethics as the search for correctness or incorrectness in the application of rules.

[7] We ran a Web of Science search, identifying a total of 42 articles published between 2012 and 2023. We used the search term *phronesis* in all fields and selected psychology for the subject field.

[8] It is interesting to note that Blasi's studies (1980, 1983) of the gap between moral reasoning and moral behaviour lend weight to the theory that, as we have described, moral action has these two facets.

(evaluation and assessment of the stimulus); (3) neuroendocrine activation; and (4) multidimensional manifestation. Clearly, this *process* includes a cognitive dimension that comes into play not only at the beginning of the process, in the form of the evaluation-assessment of the stimulus, but also at the end, in the subjective experience or feeling. It also includes a physiological dimension (since the presence of the known stimulus in various brain areas generates neuroendocrine activation that involves many parts of the brain), as well as a behavioural dimension, which manifests as a motor response or as an inclination towards a behaviour.

Whether one approaches emotion as a response or as a process, it becomes clear that, just like phronesis, emotion has two facets: cognition and behaviour. This is our basis for establishing a connection between phronesis and emotion. Interestingly, neuroendocrine activation shows that both cognition and behaviour are integrated in a single organ, the emotional brain.[9] Neuroendocrine studies show that brain activation involves two types of flows. The first of these, heading in the direction of the brain, is the various information flows—cognitive, visceral and behavioural—that are involved in emotion (Etkin et al. 2015). The second is the orders that flow from the emotional brain and extend to those same areas.[10] Again, all this shows that the same organ supports cognition and behaviour. When this organ is activated, there are no gaps between the lower level of knowledge and tendency (sensitive level), and the higher level of intelligence and will (intellectual level), because activation goes from the oldest areas of the brain to the prefrontal cortex. This makes it easier to discern a hierarchy of emotions.

The perspective we adopt here, philosophically based on Aristotle, is psychosomatic (Martínez-Priego 2021). Therefore, we do not consider the human being from the dualistic-Cartesian perspective—that is, as mind and body—but as an organic being capable of knowing and acting. Dualism provides a causal explanation for the relationship between body and mind (Franck 2022). If a human being knows and performs acts whose origin is an organic faculty (in a manner analogous to the relationship between sight and the eye), and not merely in the mind, the perspective changes radically: there is no dualism. Indeed, there is no such thing as a human being who is only matter (potency) or only a soul. Our matter is brought to life by the form; for human beings, that form is what we call the *psyche* (Aristotle 1984, [415b]). That is, a human being is both matter and form, and, owing to the characteristics of his or her form/psyche, is capable of acting towards an end. From this purely Aristotelian point of view, the problem of the causal relationship between the cognitive and the behavioural does not arise, since human beings are inherently *psychosomatic*. Therefore, our focus of study must be the matter organized by the psyche, which is organic and hence the basis of all human activities (Murillo 2010). In the current scientific literature, neuropsychology is the discipline that addresses this subject.

As we have attempted to explain, from both psychological (three-dimensional response and emotional process) and neuropsychological (activation of the emotional brain) perspectives, emotions are both knowledge and tendency. In other words, they have a cognitive dimension and a conative/action dimension. And so, for example, knowing that something is dangerous *is not* in itself fear, and neither is fleeing from danger; fear encompasses the knowledge of the threatening object and the action—or inclination thereto—of fleeing from it.

Emotion as a construct therefore includes evaluative knowledge (appraisal) and hence involves the amygdala and the hippocampus, among other brain structures (Lazarus 1984; Whalen and Phelps 2009). This evaluative knowledge is called *information processing*. It can proceed via a short circuit (that is, the prefrontal cortex is bypassed). Known as *evaluation*, this is the path taken by primary emotions. Alternatively, the processing can go via a long circuit that includes the prefrontal cortex. This is called *assessment*.[11] From this psychological perspective, cognition is intrinsic to emotion. At the same time, an action or behaviour follows knowledge, and therefore each level of knowledge corresponds to a level of tendency. The simplest evaluative knowledge (such as the perception of a threat) is followed by the individual's response or inclination thereto (fleeing, for example). Conversely, more complex knowledge is followed by a wider range of behaviours.

[9] These are the components of the emotional brain with interrelated cognitive and behavioural functions: impressions from the sense organs; the impulses of the autonomic nervous system; the information that comes from the oldest areas of the brain, including the reticular formation; the activity of the rest of the cortex (from the areas of sensitivity and motor association to the prefrontal area), which occurs via cortico-hypothalamic connections (Rof Carballo 1952; Damasio 1994); the integration of the body schema, which corresponds to other pericallosal areas; and the events experienced by the individual, which are recorded in the form of the mnemic (hippocampal) information (Pérez Velasco et al. 2023). Additionally, our information and kinetic regulations in relation to the tonic component of muscular activity and the mimetic reproduction of the attitude and physiognomy of other people allow us to understand other people's feelings (Adolphs et al. 2000). Another information flow relates to language, which is produced by the existing connections between the insula and mesial lobes of the cerebral cortex. This information is mainly processed by the amygdala (Whalen and Phelps 2009).

[10] The brain's information-input and command-output processes—that is, top-down and down-top processes, including organized cognitive and motor activation—can be found in Drubach et al. (2007), which explains them in detail, although we do not share their definition of *imagination*.

[11] Including cognition in emotion as both a response and a process distances us from the approach taken by W. James (1884).

Although each level of knowledge corresponds to a level of tendency, the emotional process can occur at various levels, from the preconscious or prerational to the intellectual.[12] Given that there are different levels of knowledge and action, and that these are part of emotion as a construct, it seems logical to argue that there is a hierarchy of emotions. We typically speak of primary and secondary emotions, but another classification—one that takes into account the known trigger/stimulus and the target of the emotion—is possible. From this perspective, it is possible to speak in terms of self-oriented emotions, other-directed emotions, other-oriented emotions and even what we have called bonding feeling (Martínez-Priego and Romero-Iribas 2021).

3.2 Philosophy of Emotion

In philosophy too there are many and varied studies related to emotions (Goldie 2009). Aristotle himself reflects extensively on emotion, and here we take up his idea that emotions are somatic, have a cognitive dimension, and are connected to ethical considerations. We additionally bring in the position of Polo (2015) and Snow et al. (2021), who argue that emotions accompany acts or, in other words, are concomitant to them.

We will only address the aspects of Aristotle that are relevant to the task of explaining the connection between phronesis and emotion. In *Rhetoric*, Aristotle explains how words give rise to mood states—that is, he demonstrates how emotions have a preceding cognitive dimension and that passions also have cognitive effects (Aristotle 1985, [1378a]). (Here it must be kept in mind that *cognitive* is not synonymous with *rational* or *conscious*, as we have explained.) In this sense, our position is "soft rationalist" (Kristjánsson 2018a), though we understand that the cognitive dimension of emotion is not extrinsic to the emotion itself, and neither is it always rational-conscious (for it can be prerational).[13] In *De Anima* (Aristotle 1984, [403a]), Aristotle makes clear that emotions are linked to the actions of organic faculties such as memory. Lastly, in *Nicomachean Ethics*, he explains the connection between emotions and voluntary actions. He sees emotions as being at the origin of mixed actions—these are neither voluntary nor involuntary, though he concludes that they tend more towards being voluntary (Aristotle 1985, [1110–1111])—which means that they have a tendency-action dimension. He also claims that impulses or desires are not subject to deliberation (Aristotle 1985, [1111b]), and that emotions precede voluntary actions. In this sense, emotions can be viewed as preferences. This aspect of Aristotle is interesting because of its connections with findings from studies on the neuropsychology of emotion: primary emotions do not involve the prefrontal cortex, which is a condition for moral judgement. This quick overview that we have provided shows that Aristotle considers emotion according to three dimensions: organic, cognitive and hierarchical.

From a psychological perspective, we have seen that emotion *is* a multidimensional activation of cognitive, tendency and motor structures. All one's emotions belong to one person—that is, it is the person himself or herself who feels and experiences these emotions. In this sense, emotions, if we study them philosophically, involve not only knowing something or tending towards something; they are also the *states that accompany appraisal and tendency operations* (Polo 2015; Martínez-Priego 2019; Snow et al. 2021). This is why in philosophy emotions are also known as *passions*: they are not acts—the idea of doing joy or fear is nonsensical—but states that accompany knowledge and action.[14] To use the example of fear once more, this is the state that accompanies the knowledge of the threatening thing and the flight from it, or the inclination to flee.

In the context of emotions, evaluative knowledge assesses the environment and one's own psychosomatic condition—that is, how I am feeling, and whether I am able to face the present challenge. Here there are parallels with some of Frijda's laws (1988)—for instance, the law of concern and the law of situational meaning. The prerational knowledge included in any emotion comes from the senses—that is, organically mediated by the individual—and therefore it is not knowledge of reality qua reality. Such emotions arise in the face of sensitive stimuli. So, for example, if on a day when I am going to climb a mountain I am in good spirits, the challenge will lead to a positive emotion. Conversely, if on this day I am in a low mood, I will feel *despondent* about the climb. Some emotions also arise when the individual has made the conscious choice to face something that he or she intellectually understands. For example, if I know I have a friend on top of the mountain who needs me, I will voluntarily make an effort to climb it, even if I feel ill; instead of feeling despondent, I will feel *hopeful* about helping her. Furthermore, if emotions are states that also accompany intellectual and voluntary acts, we might postulate that emotions can be related to phronesis insofar as the former are the

[12] Since there is no discontinuity between the different levels of knowledge, it makes sense to speak of prerational knowledge (which is preconscious), rather than irrational knowledge. Preconscious knowledge is antecedent to subsequent knowledge, but it is not opposed to rational and intellectual knowledge.

[13] We share Sauer's (2022) criticism of the separation between knowledge and emotion, though we do so with regard to all cognitive levels (which are hierarchical) and not just the rational dimension.

[14] W. James (1884) speaks of "state," referring to both "mental state" and the "bodily disturbance." In his case, the approach is dualistic, but he attempts to provide a comprehensive view.

latter's antecedent. Precisely because emotions accompany senses and intellect, we can study where and how phronesis and emotion connect, and it also follows that emotions are hierarchical.

* * *

In psychology, emotion is typically studied as a response or a process; both viewpoints converge in conceptualizing emotion as having a cognitive dimension and a tendency/behavioural dimension. Although such conceptualization could be understood in a dualistic (Cartesian) way, we have drawn on Aristotelian arguments to assert that a human being is not mind *and* body, but matter-psyche—that is, organic. Adopting an organic perspective, neuropsychology indicates that when the emotional brain (the organ of emotion) is activated, it encompasses cognitive, tendency and motor structures. Philosophically, emotion is a state that accompanies knowledge and actions (which can include decision making). This means that, under a philosophical perspective, emotion does not have a decision-making component, whereas under a psychological viewpoint, it encompasses conation or action (the tendency to flee or actual flight, in the case of fear). Linking emotions and phronesis is possible because both share the same cognitive-behavioural structure, and emotions entail no gap between the cognitive and the tendency-behavioural aspects. Critically, phronetic acts can only manifest if cognition and behaviour are activated at the same time. The other thing that makes confluence between phronesis and emotion possible is the hierarchical nature of emotions. That is, the integration of phronesis into the dynamics of emotion and vice versa requires sensitive knowledge to exist in continuity with intellectual knowledge, and corresponding tendency-behavioural levels to exist alongside knowledge levels.[15]

4 Confluence Between Phronesis and Emotion

Although the constructs of phronesis and emotion have been mapped out in psychology and the philosophy literature provides explanations of both concepts, as we have indicated, very little has been published on the connections between phronesis and emotions, hence the exploratory nature of our study.

Below, we study these connections by identifying the points of confluence that exist between the two in terms of the emotional processes and the dimensions that phronesis entails. And we also consider the effects that phronesis and emotions exert on one another via these points of confluence. Specifically, we argue that confluence between phronesis and emotion is structurally possible (Sect. 4.1) because both have a cognitive dimension and entail motivation/action, and because emotions are hierarchical. In addition, we propose that this confluence has bidirectional mutually enriching effects (Sect. 4.2) in this double dimension (cognitive and motivational/action). At the same time, we suggest that the interplay between phronesis and emotion is possible rather than inevitable, because emotions do not guarantee that the phronimos will make the right decision, and neither does sound decision making on the part of the phronimos guarantee that the emotions that follow on from the decision are the right ones.

4.1 Where Phronesis and Emotion Come Together: The Conditions that Make Connection Between them Possible

Before we set out our argument, we must point out two difficulties posed by philosophy and psychology. The first is the separation between cognition and emotion; the second is the separation between the sensitive level of knowledge (which certain authors interpret as an irrational level) and the intellectual-rational level of it.

4.1.1 Two Difficulties

In psychology, the first difficulty emerges when cognition and emotion are separated and juxtaposed—that is, when it is suggested that emotion does not include cognition. This difficulty can be found in the debate between Zajonc (1984) and Lazarus (1984).[16] Zajonc juxtaposes emotion and cognition in part because he thinks that *knowledge* refers only to *conscious* knowledge (Palmero et al. 2006) and therefore is not part of emotion, the origin of which is preconscious. However, Polo's theory of knowledge (Polo 2015) affirms that there are preconscious levels of knowledge—for instance, sensing, perceiving (Sanfélix Vidarte 1999), remembering (Benítez and Robles 1999) and imagining. All of these can be the beginning of an emotional *state*. If knowledge is prerational as well as conscious, and inferior knowledge is a condition of superior knowledge, this juxtaposition disappears.

[15] There has been scholarly discussion on metaemotions and emotion regulation (Norman and Furnes 2016; Jesline et al. 2022; Kristjánsson 2023). We have offered a hierarchical model of emotions (Martínez-Priego and Romero-Iribas 2021) that creates scope for including the intellectual dimension and, therefore, phronesis. Metaemotions may be able to take the place of what we call *higher emotions*, or even that of *phronesis*.

[16] In James (1884), emotions are felt tendencies, a definition that pushes cognition aside.

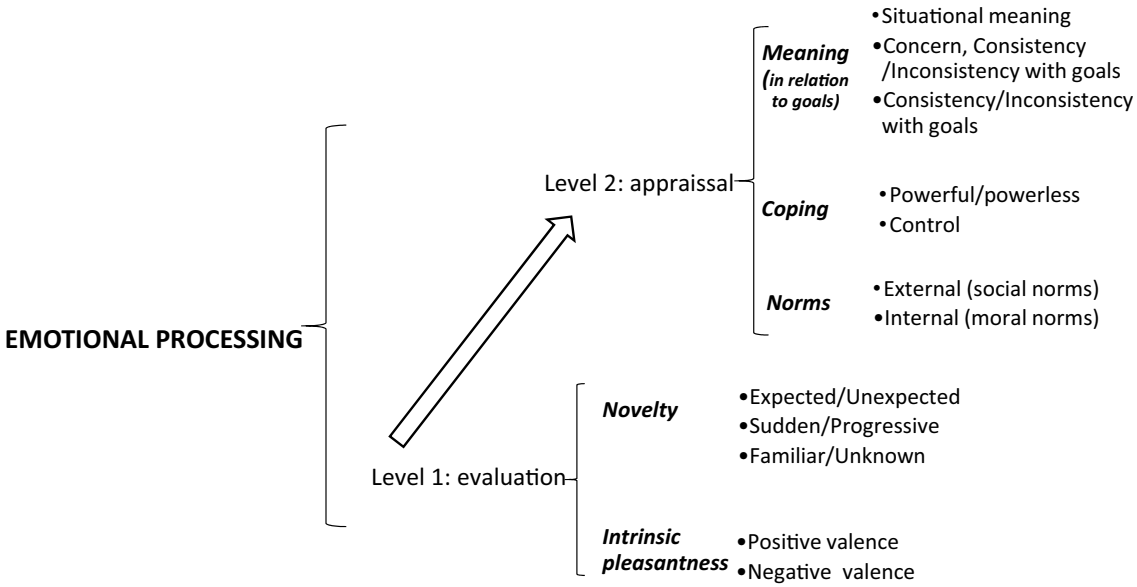

Fig. 1 Emotional processing (cognitive dimension of emotion)

The second difficulty comes from philosophy and concerns the *separation* of *the sensitive-irrational* and *intellectual-rational* levels of knowledge. This separation, which has Cartesian roots, extended to Kantian thought and the philosophy of science (Colomer 2002) as well as, later, to constructivism in psychology. It implies that emotions are a matter either of rationalism and control or of emotivism and irrationality. In the first case, the relationship between phronesis and emotion is reduced to the former's *control* over the latter (Kristjánsson et al. 2021). Emotion might even be deemed something negative that should be suppressed (voluntarism). In the second case, emotions govern decisions, leading to behaviours that are emotivist (Llano 2017) or, as Sauer calls them, emotionist (2022). Emotivism is therefore bound up with a negative view of reason, which is understood as instrumental.

Although we cannot set out all the arguments concerning the limitations of the juxtaposition between the sensitive-irrational and the intellectual-rational, we can offer some possible solutions to this problem by drawing on contributions from neurology and on theories of knowledge with Aristotelian roots. Neurological studies on basic cognitive processes show that there are no gaps between cognitive levels, but rather a progressive expansion of brain activation that begins with the simplest processes before extending to the most complex ones, at which point the prefrontal cortex becomes involved (Drubach et al. 2007; Waldinger et al. 2011). There is therefore continuity between the sensitive and the intellectual. Even if thinking were not organic, it would not be possible without brain activation.

On the other hand, neo-Aristotelian contributions to the theory of knowledge explain that, with respect to information provided by sensations, knowledge is active and not passive. In addition, the different levels of knowledge illuminate what is contained in the preceding levels. For example, perception illuminates what is known through sensations, and imagination illuminates what is known through perception (Polo 2015).[17] Both arguments, then, indicate that sensitive knowledge is *prerational but not irrational*—that is, there is continuity between the sensitive and the intellectual, not juxtaposition.

4.1.2 Emotional Processing: Cognition and Behaviour

If these two aforementioned difficulties can be overcome, we can speak of connection between the emotional process and phronesis. We will now focus on the structure of emotion as a process specifically within emotional processing.

In Fig. 1, we offer a schema of emotional processing that is based on Scherer (1982) and Fernández-Abascal et al. (2010).

On the first level, we have what we call *primary* emotions; these *evaluate* stimuli (primary appraisal) according to their *novelty* and *intrinsic pleasure* and via a short neurological circuit. Such a circuit would be activated, for instance, in the case of the person who has to climb the mountain (familiar) but is in a low mood (negative valence) and feels discouraged. These emotions do not require the activation of the prefrontal cortex and,

[17] This argument requires a detailed explanation of knowledge as an act. Accordingly, we refer readers to Leonardo Polo's course on the theory of knowledge (Polo 2015, 2016a).

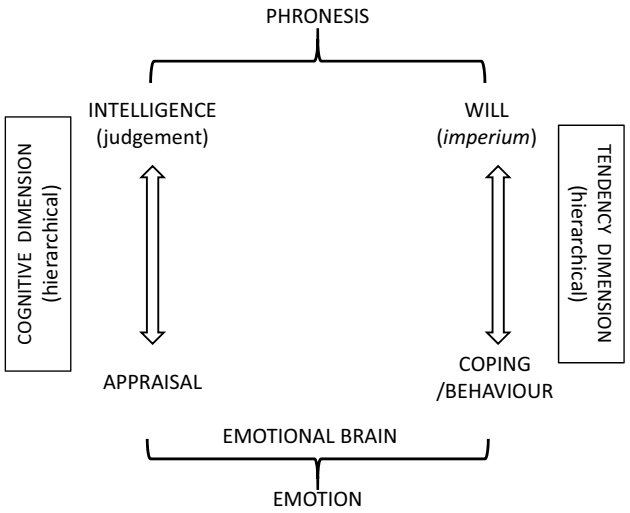

Fig. 2 The structural confluence between phronesis and emotion

therefore, do not reach the second level of emotional processing—that is, they are prerational. On the other hand, as with all primary emotions, the evaluation of any stimulus engages the individual's capacity to cope—that is, a tendency or behaviour associated with withdrawing from or coming closer to the stimulus.

At the second level of emotional processing, called *assessment* (secondary appraisal), the salient criteria for assessing the information received from the previous level is: a) the *meaning in relation to goals and the context*, b) the individual's capacity to *cope* and c) *norms*, whether social or moral. For example, a shy person at a large party may feel self-conscious and want to leave; however, when he or she further assesses the situation (second level), he or she perceives that he or she is a special guest because the host is a good friend (meaning); he or she realizes that there are norms of politeness (social norms) or recognizes the affection he or she has for the friend (ethical norms), and thus feels able to deal with the situation and stay.

This analysis of emotional processing demonstrates the presence of a cognitive dimension, appraisal at both levels, and an action/behaviour or tendency itself (here it must be kept in mind that emotion is also a behavioural response). In other words, emotion, like phronesis, has two facets.

4.1.3 Confluence

What allows confluence between phronesis and emotion is their respective structures and the hierarchical nature of the cognitive and tendential dimensions of emotions. In Fig. 2, we propose a model of confluence.

The cognitive dimension is the first point of structural confluence between emotion and phronesis. Phronesis has a cognitive dimension (intelligence) that allows it to understand and elucidate the concrete reality of its circumstances (judgement). Therefore, phronesis guides the decision and the action. In doing so, it considers the ultimate end of the action, which emotion cannot do without the aid of practical intelligence. On the other hand, phronesis, which knows on an intellectual level, is based on the sensitive knowledge (preference) that the cognitive dimension of emotion (appraisal) provides. Hence, emotion too is the antecedent of the phronimos's actions.

The second point of confluence between phronesis and emotion is the tendency dimension, be it sensitive or voluntary. At the sensitive level, following an initial evaluation, a person may not feel capable of doing a given task (coping). However, he or she may subsequently reevaluate the situation and feel able to act. This evaluation process can be repeated and is bottom-up (Gross 2015). By the time the repeated appraisal reaches the intellectual level, the tendency to act has become voluntary (will). This is the point where emotional coping is connected to will (*imperium*). Again, the hierarchical nature of emotion is evident here, but this time it is observed from the perspective of the inclination towards action or acting itself.

If the emotional dynamic is triggered after the individual obtains knowledge of a stimulus, the previous point implies that emotional regulation is not so much about controlling cognitive processes as it is about the growth of them—that is, the higher cognitive level includes the lower level and improves it. For example, perceptual knowledge better fits reality and is more complete than sensory knowledge of colour. This cognitive hierarchy corresponds to a hierarchy of tendency or behaviour. At the apex of this dynamic, knowledge can reach the intellectual level, making the performance of moral acts (which include will) possible.

Thus far, we have attempted to argue that the relationship between emotions and phronesis is *possible.* Next, we will explain how it is bidirectional and mutually *enriching*.

4.2 Mutual Enrichment: What Connection Looks Like

What do we mean when we say that phronesis enriches emotion? Emotion provides the individual with assessments that are mediated by his or her psychosomatic situation and relationship with his or her environment. However, through its cognitive dimension, practical wisdom facilitates the individual's connection with the extrasubjective world and allows him or her to understand it in a way that goes beyond his or her psychosomatic situation. That is, practical wisdom allows the individual to make an assessment of stimuli that is better aligned with reality. For instance, a diabetic person

may feel like eating chocolate because he or she knows that he or she likes the taste of it; but phronesis will allow him or her to know that chocolate is detrimental to one of his or her higher ends, namely health.[18] When this dynamic is repeated within a person, the sensitive cognitive faculties of emotion (cogitative-estimative) are perfected or enriched, meaning they become more accurate in their assessment. This is what we consider an educated or harmonized emotion in the dynamics of the human psyche,[19] though an educated emotion does not necessarily lead to virtuous behaviour.

For its part, the tendency dimension of phronesis, which involves will, improves emotions by developing the individual's emotional inclination towards behaviour. That is, it fosters the tendential capacity of emotion, in two ways. On the one hand, emotion, as tendency/behaviour, can have a greater scope when it is reinforced by free decisions; it can even bring about the opposite of what the affective tendency indicates, as the above example involving chocolate shows. On the other hand, as phronesis provides extra subjective knowledge, it allows us to work towards a greater goal, which in the above example is prioritizing health over the pleasure of eating.

Therefore, phronesis enriches emotion in two respects: it incorporates extra subjective knowledge, and it allows emotion to reach higher goals.

But how do emotions enrich phronesis? First, they help us to understand the concept of phronesis, which is based on emotional assumptions, meaning that the intellectual-knowledge dimension of phronesis originates from prior sensitive (preconscious) knowledge, and phronetic decisions are made based on sensitive preferences. Therefore, phronesis discerns based on what the senses give it, and without prior inclination, it would have nothing to decide upon. Accordingly, to properly understand phronesis, we need to refer to emotions.

Another reason why we argue that emotions enrich phronesis is that, once a decision is made and an action is taken in the corresponding context, *emotions constitute a confirmation of the correctness of a behaviour if they are educated.* This is because the main characteristic of educated emotions is proportionality between stimulus and response—that is, the valence and intensity of the emotions fit reality.

As we explained in Sect. 3, emotions precede, accompany or follow actions (Romero-Iribas and Martínez-Priego 2022). In the case of phronetic acts, educated emotions understand the alignment between the situation judged by phronesis (which correlates with the reality of the stimulus) and the subsequent behaviour, in such a way that these educated emotions follow the phronetic act proportionally. This is precisely where the confirmation that emotions contribute to phronesis lies. Consider two examples. A person dealing with an unfair situation acts fairly and feels good for doing so. And, conversely, he or she feels guilty when he or she acts dishonestly. These feelings do not replace the intelligence that judges the situation and the conduct itself; they ratify it. Aristotle himself points out that naturally good actions generate pleasure, as is the case with learning (1985, [1371a 31–34]).

In sum, emotions enrich phronesis because they not only allow a better understanding of how phronesis works but also confirm whether a moral decision is correct.

5 Discussion and Conclusions

Sound decision making has attracted the attention of psychologists and philosophers, and the study of phronesis directly ties in to this interest. However, while the relationship between virtue and emotions has been studied, that between phronesis and emotion has not. Accordingly, this article's objective has been to identify, based on philosophy and psychology, the points of confluence between phronesis and emotion and to explain what these points' characteristics are.

Our study is strengthened by the inclusion of the motivational and behavioural dimensions in emotion, and of will in phronesis. To our knowledge, models of phronesis focus on information processing and indicate that phronesis guides action. However, action itself, which is critical in the case of phronesis, seems to be left out of these models.

One of the contributions we make through this article is our model of confluence between phronesis and emotion. It is based on the two facets that phronesis and emotions share, as well as on the hierarchical nature of emotions. Emotions exhibit a knowledge/action duality when they are studied as a response or as a process, and neuropsychology makes it clear that there is no relationship of juxtaposition between them. Moreover, emotions are hierarchical—that is, they range from sensitive to intellectual knowledge (which the corresponding tendencies follow). Both the double-faceted

[18] In Gross's model of emotional regulation, extrasubjective knowledge can be seen in the increasingly broad assessment systems for more complex acts that trigger other assessment systems (2015, pp. 11–12). This suggests that if those other assessment systems perceive a discrepancy between a *representation of the world* (subjective) and a *representation of a goal* (objective), the intellectual level has been reached.

[19] We appreciate that under this explanation, educated emotions are not exactly the same thing as virtuous emotions (Kristjánsson 2018a), which, as far as we understand, are emotions infused with rationality. We believe that the lower level—the emotion itself—is perfected in such a way that the higher level (intelligence) does not replace the lower. For example, when a child learns vocabulary about colours, he or she learns to "see" more colours; this is not because eyesight is replaced by intelligence, but rather because the eyesight has become more refined.

structure and the hierarchy that we have described allow us to identify where the confluence between phronesis and emotion occurs.

Based on the Aristotelian approach to emotions and the neurology of emotion, it seems clear that this confluence has an organic counterpart: the emotional brain. Studying the processes of brain activation reveals that there is no discontinuity either between cognition and tendency or between sensitive and intellectual knowledge, a precondition for placing emotion within the dynamics of phronesis.

Emotions and phronesis mutually enrich each other via two points of confluence: the cognitive dimension and the tendential dimension. On the one hand, phronesis is supported by emotional assumptions, namely the cognitive preferential system and motivational/behavioural dimension of emotion, both of which are based on neuroendocrine activity. On the other hand, emotions confirm the correctness of decisions when the latter are educated—that is, harmonized within the faculties of the human psyche. In turn, phronesis enriches emotions because it links the individual with the extrasubjective world and directs emotions towards higher goals.

Our theoretical model on the mutually enriching confluence between phronesis and emotion should be tested via empirical research. We believe it is important for practical wisdom to be studied based not only on reasoning but also on behaviours, since we see phronesis as both an intellectual virtue and a moral one.

The major theoretical difficulty that our approach comes up against should also be the focus of future research. Emotion is a state that accompanies acts (cognitive-assessing and tendential). Therefore, both the psychological construct and the philosophical concept of emotion must set out the concomitance between cognitive-tendential acts and the individual's emotional state. As we have argued here, if cognition and tendency are hierarchical, so too is emotion. This opens the door to the theoretical position that some emotions are states accompanying moral judgment-acts. In such a case, if emotions are concomitant with acts, there is no upper limit for them, meaning that, there is no level at which reason alone operates.[20] The explanation of the hierarchy of emotions and its relation to phronesis positions emotions as *precedents* of the intellectual-voluntary acts of phronesis, as *accompaniments* of those acts and as a *consequence* of them.

Perhaps this difficulty could be overcome by taking the view that emotions are states of the *person* that go along with acts of the *person*. If so considered, ontologically speaking, the highest is not the virtue but the person.

[20] Martínez-Priego and Romero-Iribas (2021) provides insight into this.

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Declarations

Conflict of interest The authors declare that they have no conflict of interest.

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