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Scientific articles

Las sensaciones emotivas y los enunciados morales generan conocimiento científico

Emotional feelings and moral statements generate scientific knowledge

Sensações emocionais e declarações morais geram conhecimento científico

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Resumen

La epistemología predominantemente del empirismo lógico y del racionalismo destaca, que solo las premisas descriptivas y empíricas deducen conclusiones verdaderas válidas. Rechazando toda enunciación moral y afectiva por expresar algún deseo, pero que son imposibles de valorarse como verdaderas. El propósito del presente texto fue demostrar que los enunciados morales y las emociones generan conclusiones válidas y ayudan al saber humano. Se siguió un procedimiento cualitativo, realizándose un análisis teórico de las premisas epistemológicas y deduciendo sus limitaciones argumentativas. Los resultados mostraron, que al asumir plenamente premisas, aunque sean valorativas, enunciativas de deseos y/o prescriptivas, se obtienen conclusiones viables. Asimismo, se encontró, que las emociones como la intuición y la simpatía trabajan juntas para producir conocimiento. Determinando así, que las argumentaciones morales y las emociones deducen conclusiones viables del conocimiento.

Palabras clave: Epistemología, emociones cognitivas, deseo, deliberación, eudaimonía

Abstract

The predominant epistemology, the logical empiricism and the rationalism, highlights that only descriptive and empirical premises deduce valid true conclusions. Rejecting all moral and emotional statements to express some desire, because which are impossible to assess as true. Nevertheless, the purpose of the present manuscript was to demonstrate that moral statements and emotions generate valid conclusions and help understand the world. A qualitative procedure was followed, analyzing the epistemological premises, and showing their argumentative limitations. The results showed that by fully assuming premises, even if they are evaluative, enunciative of wishes and/or prescriptive, viable conclusions are obtained. Likewise, it was found that emotions such as intuition and sympathy work together to produce knowledge. Thus, determining that moral arguments and emotions deduce viable conclusions of knowledge.

Keywords: Epistemology, cognitive emotions, desire, deliberation, eudaimonia.

Resumo

A epistemologia predominantemente do empirismo lógico e do racionalismo destaca que apenas premissas descritivas e empíricas deduzem conclusões verdadeiras e válidas. Rejeitar todas as afirmações morais e emocionais que expressem algum desejo, mas que sejam impossíveis de avaliar como verdadeiras. O objetivo deste texto foi demonstrar que declarações morais e emoções geram conclusões válidas e auxiliam o conhecimento humano. Seguiu-se um procedimento qualitativo, realizando uma análise teórica das premissas epistemológicas e deduzindo suas limitações argumentativas. Os resultados mostraram que ao assumir integralmente premissas, ainda que avaliativas, enunciativas de desejos e/ou prescritivas, obtêm-se conclusões viáveis. Da mesma forma, constatou-se que emoções como a intuição e a simpatia trabalham juntas para produzir conhecimento. Determinando assim que argumentos morais e emoções deduzem conclusões viáveis do conhecimento.

Palavras-chave: Epistemologia, emoções cognitivas, desejo, deliberação, eudaimonia

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Introduction

What is knowledge? The traditional idea that knowledge is a justified true belief is unreliable for understanding the world. Likewise, the predominant epistemology based on observable facts and apodictic logic is limited in achieving scientific knowledge (Rodríguez, 2020). Thus, the purpose of this paper is to demonstrate that both moral statements and emotions help to get closer to knowledge.

Let us introduce that the meaning of knowledge as a justified true belief is limited in knowledge. In this regard, Rescher (2003) asserts three connotations about believing. He argues, first, that believing is a weak knowledge, like a weak possibility; for example, “I believe that I will live 90 years.” Second, believing when compared to knowledge strengthens it, as in stating, “I not only believe that he is 90 years old, I fully know that he is living 90 years.” Another meaning can be established in the following way: “I know that I am living 90 years, but I cannot believe it yet or I know that I am in Paris, but I cannot believe it yet.” Thus, believing is unreliable for achieving knowledge, since it can both strengthen and weaken it.

This lack of reliability is also present in justification. Rescher (2003) states that justification can be relative or contradictory. For example, I know that he is a liar because I have always heard lies from him, while someone else asserts that he is truthful because he has always behaved truthfully. Another connotation would be that for one person a wall is green and for another, the same wall is blue. The truth in both expressions is that he is sometimes a liar and other times he is truthful, and that the wall is green and a little blue. In this way, it can be established that all of them truly observe different colors and behaviors. Therefore, justification based on observed facts does not always lead us to have certain knowledge. In this way, the conventional assumption that assuming a justified true belief turns out to be unreliable for achieving effective knowledge about something.

Although it is unreliable, assuming scientific knowledge as a justified true belief, knowledge and human progress have been driven by science. From it, human beings perceive, describe and understand natural, real, social and imaginary phenomena (Rodríguez, 2020). That is, science as a whole seeks to understand everything that is presented to them to achieve some purpose, whether useful, contemplative or out of curiosity. In this sense, issues of knowledge are studied by epistemology, which addresses knowledge of the world and the limits of that knowledge. Precisely, epistemology is considered the philosophical branch that addresses how to achieve scientific knowledge (Rodríguez, 2020) .

For knowledge to be considered as such, the main epistemological currents consider several assumptions. Among these, the sensitive perception of logical empiricism and the deduction of rationalism stand out predominantly (Rodríguez, 2020; Flores, 2011). These epistemological currents reject moral statements in the formation of knowledge, establish that these types of arguments do not describe anything and therefore cannot be true or false, but only express desires or feelings (Zavadivker, 2016; Roeser, 2011). These perspectives of knowledge exclude moral arguments and the emotions linked to them as viable routes to knowledge (Zavadivker, 2016; Flores, 2011).

Thus, the purpose of this research work is to demonstrate that both moral statements and emotions generate knowledge and help to obtain knowledge. The way in which beliefs and moral statements can equally be valued as true is exposed. In addition, moral arguments and emotions can also follow a deductive process as in all valid scientific knowledge.

Methodology

According to Lopera et al. (2010), Quesada and León (2020), Rodríguez and Pérez (2017), this research followed an analytical and deductive theoretical method. The viability of the predominant epistemological premises was analyzed and their argumentative limitations were shown. The theoretical analysis of the epistemological premises, as suggested by Torres (2020), included an intentional systematic review of the main bibliographic databases, Google Scholar, Scopus, Redalyc and Web of Science, published in English and Spanish; in addition to related books. Where the conventional arguments of knowledge that reject moral statements and also emotions were identified. The validity of the descriptive and empirical principles on the supposed epistemological limitations of moral statements and emotions was studied. This analysis of evident initial demonstrative propositions deduced that such limitations are unfounded, that moral arguments and emotions provide valid conclusions about knowledge.

Results

The details of the analysis and the resulting deductions are shown in this section. First, the arguments in favor of a descriptive rationality exclusive of a logic based only on truth values are presented. The arguments in favor of a conventional, logical, empirical rationality, disassociating emotion from cognition; assuming the rejection of moral expressions as valid propositions. Then, it is analyzed that observable facts do not prove anything and that desiderative and imperative arguments are feasible. Thus determining that knowledge is valid from emotions and moral rationality. Proposing the intuitionist alternative, of principles generated from particular intuitions and characteristics of *projeresis* as a feasible path to knowledge. Concluding that knowledge is valid from emotions and moral rationality.

The rejection of moral expressions as valid propositions

Roeser (2011) and Flores (2018) explain, regarding logical empiricism and rationalism, that only beliefs have cognitive content. They also establish that knowledge is a belief based on sensory perception. This is based on observable facts, which follow a deductive process of premises assumed as true (Rodríguez, 2020; Roeser, 2011). These authors determine that, only from such premises, logical knowledge and rationalism can establish laws and explanations (Flores, 2018; Roeser, 2011).

Thus, concerning logical empiricism, Zavadvker (2016) goes on to explain that, based on sense perception and rationalist deduction, moral statements are considered to describe nothing and are not considered assertions, nor are they worthy of being considered as true or false propositions. Zavadvker (2016) shows that moral statements, being value assessments, have a sense of desiring something good or something as correct, but they do not express any sense of certainty.

Using this same argument, Zavadvker (2016) and Flores (2011) establish that certain phrases can be expressed as sentences of what is desired and should be. For example: killing is bad, stealing is not right. These are utterances with a sense of desirable sensation or rejection. But these expressions, according to logical empiricism, affirm a desire, but do not establish any proposition valued as true (Zavadvker, 2016; Flores, 2011).

From this perspective, it is considered that desires for what is good or correct, as emotional expressions, are an obstacle to fine and accurate philosophical reasoning, which

leads to an accurate response (Flores, 2011) and, therefore, they should be excluded from all science, since all demonstrative science is unequivocal and true.

Thus, no reasoning can take place on the moral plane (Zavadivker, 2016) . According to this author, emotivism could only admit persuasion or mere moral rhetoric, so there would be no criterion to distinguish valid statements from those that are not (Zavadivker, 2016) .

It is considered that moral reasoning only expresses desires and a persuasive oratory that is not viable in apodictic logic (Zavadivker, 2016) . Likewise, for empiricism and logical positivism, according to Flores (2018), Roeser (2011) and Zavadivker (2016), there is no more objective knowledge than that which can be acquired through sensory experience and that the moral sense lacks cognitive value, since its experience is not considered true but only expresses desires . Admitting, in this sense, that cognitive value derives exclusively from true statements (Flores, 2011; 2018) and everything that cannot be verified through sensory means is rejected (Flores, 2011) .

It is important to demonstrate that observable facts alone are not viable for achieving knowledge. It is also necessary to point out that moral reasoning is cognitively viable, that moral evaluations determine valid conclusions (Zavadivker, 2016) , which is demonstrated below.

The dubiousness of the facts

First, it is shown that observable facts do not prove anything and that a true conclusion is only reached from principles. The sensible perception of logical empiricism (Rodríguez, 2020; Flores, 2011) establishes that only true factual reasoning is knowledge. However, against this assertion, it can be argued that it is not logically viable to go from factual reasons to a conclusion. Because a conclusion is only reached through fully accepted principles and never from an observable fact (Hernández, 2009a).

Similarly, moral conclusions are deduced only from fully accepted principles and observable facts only tacitly constitute good reasons for a moral conclusion (Hernández, 2009b). It is not feasible, therefore, to make deductions from observable facts but only from accepted principles (Hernández, 2009a, b). Zavadivker (2016) exemplifies this in the following way, from witnessing the murder of a person, which produces indignation in the witness and, therefore, a moral assessment of the observable fact, but only implicitly. This author warns that the observable fact of a murdered person, by itself, does not cause the assessment, but rather because of the close relationship between the fact and some moral

principle. In this example, the principle that “a murder is mean” is implicit, and can subsequently be identified through the fact and explicitly stated (Zavadivker, 2016) .

In the example cited, the moral assessment that “murder is mean” would be implicitly present in our indignation (Zavadivker, 2016) . In the assessments of any breach of principles, any violating fact, for example “when we find out that a person was raped” or “when we realize that a person was deceived,” the judgment that these facts are morally despicable acts would be tacitly present in our indignation and not because of the facts themselves.

The same is true of virtuous acts: “knowing that a person’s life has been saved,” the assessment that saving lives is a morally appreciable act, or any well-valued act, would be equally implicit in our joy. We conclude only exclusively through fully accepted principles and never through observable facts.

Similarly, it is with the observable facts of any science. In biology, for example, the observation of “a fatty tissue on the front of an animal’s thorax” does not by itself cause the assessment of its true compliance with the principle that “a mammary gland constitutes a mammal.” Another related observable example would be: “a circular hollow on the front of an animal’s head” does not by itself cause the assessment of its true compliance with the principle that “a mammary gland constitutes a mammal.” Such an assessment of its true compliance with the principle would be implicit in our observation of that fact, the principle that a mammal is constituted by mammary glands and that an eye is an eyeball vital to the sense of sight is not evident in the observed fact. On the contrary, the corresponding assessment of true compliance is implicit by a pre-established principle.

Likewise, recording new factual information can modify specific principles and determinations, but only if they are strongly related to pre-existing principles. If we observe that when we throw an object it does not fall to the ground, our principle on gravity would be called into question or would imply that it is perfectible. Looking, listening and any sensible experience is limited by the perceptible spectrum. The empirical experience is mistaken by the very fact of being carried out in a limited sensible world. Thus, every discipline, its laws or principles, by recording a fact that contradicts it, implies a correction of the principle.

In the field of morality, Zavadivker (2016) points out the following example: “finding out that a man that we admire beats his wife can change our esteem about him, but this is due not only by his action but also to the fact that such action seems morally reprehensible to us” because it is related to a principle, which in this case states that hitting a person is bad..

Therefore, according to Manzo and Calvente (2022) and Zavadivker (2016), it is demonstrated that the principles assumed by us are those that give meaning to the observable facts, their assessment of true or correct . In this way, we confirm the determination of Zavadivker (2016) , that one does not go from mere factual reasons directly to a conclusion, but only by fully assumed principles (Zavadivker, 2016; Manzo and Calvente, 2022).

Validity of moral reasoning

An additional epistemological disqualification of moral reasoning and its respective emotional statements comes from logical positivism. This disapproval is based on the apophantic logic proposed by Russell, by the Vienna Circle and, in part, by Wittgenstein, which proposes a reasoning restricted exclusively by true premises (Zavadivker, 2016) . However, as this perspective is abandoned, it is recognized that it is not necessarily required to deduce conclusions based solely on values of truth or falsehood (Zavadivker, 2016). This author proposes the following idea of validity: a deduction is valid if it is rigorously inferred from its premises, which may be general and not exclusively true.

This thesis, on the strict deduction of premises, covers any statement, both elementary descriptive and non-descriptive. Zavadivker (2016) also considers that prescriptive premises, simple or compound, and any other type of assessment deduce a valid conclusion. In this way, arguments based on descriptive propositions, such as “today is Monday” which is true or false, and prescriptive ones, such as “one should not murder”, which marks an imperative to be fulfilled, can be examined under the inference of their premises. Thus, the idea of apophantic logic is only a particular case of validity of this other broader thesis, the unquestionable deduction from premises (Zavadivker, 2016) .

Regarding this assessment of truth, it has been established that this is not the only deductive form that has been valid since ancient times (Segura, 1994). Since the Greek sophist Protagoras had already established that the assessment of truth comes from the position concerning and assumed with respect to the truth of the premises or beliefs. Protagoras is often considered the philosopher who demolished the criterion of truth, establishing that all opinions or beliefs about an object are true relative to the position held with respect to that object (Samaranch, 1995; Leyra, 2019; Hernández, 2022).

For example, about lying that seems good for one person and bad for another. For both people their beliefs are true, the first can affirm that lying is good to protect someone and the other will believe that lying is bad no matter if it is to protect someone, out of pity or

another purpose (Horneffer, 2008). Therefore, both opinions are reasonable and there is no contradiction, because their beliefs are true in relation to them (Striker, 1996; Plá, 2020).

Likewise, following what was stated by Zavadvker (2016), regarding the thesis on this consideration of validity, we establish two valid examples of non-descriptive moral reasoning.

Argument 1:

Premise 1 Someone wishes to teach those who do not know is a good person.

Premise 2 Victor wishes to teach Jesus, who does not know.

Conclusion Therefore, Victor is a good person.

Argument 2:

Premise 1 Someone fulfills a duty is a good person .

Premise 2 Pablo fulfills his duty to help Memo .

Conclusion Therefore, Paul is a good person .

The two valid moral conclusions, which judge Victor and Paul as good people, are deduced from a moral principle accepted as an initial premise and from the factual assertion of a second premise that satisfies the first. That is, Victor teaches, Paul helps, and both the one who teaches and the one who helps are good. These examples demonstrate that moral arguments, those that express desires and norms, that of teaching and that of fulfilling a duty, have logical relations with each other and, therefore, the validity of moral reasoning is possible (Zavadvker, 2016).

As has been discussed and explained with the exemplified arguments, it is clear that arguments are not necessarily accepted based solely on truth values. There are valid moral reasonings that do not manifest only irrational desires or a mere insipid persuasion. On the contrary, by fully assuming premises, even if they are evaluative, enunciative of desires and/or prescriptive, they are imposed as valid deductions.

Emotion over reason. Cognitive emotions

Logical positivism and rationalism establish that emotions only express an affective sensation towards an object, they do not establish a true proposition and therefore, they are not objective knowledge (Flores, 2011). However, strong questions have been raised about the *Humean dichotomy* between emotion and reason. This point focuses on the cognitive characteristic of emotions (Scherer, 1984).

Here we raise questions against the assumption that emotions, as blind passions, are an obstacle to fine and accurate reasoning that leads us to an accurate answer and, therefore, must be excluded from all wisdom, since all science is demonstrative, unequivocal and true (Flores, 2011). We then demonstrate how emotions, intuition as a particular emotion, help to understand and have knowledge.

Emotion is a pleasant or painful sensory alteration that affects a person's judgment. According to Cooper (1999), Aristotle identified the elements that make up emotions. In this sense, events suddenly and abruptly touch the affected person's senses, like a knock, causing agitation in the individual. According to Cooper (1999), this alteration is recognized as an emotion that causes a reactive desire to the knock and helps to understand the particular situation.

Some emotions are cognitive, with affective states of understanding (Liu, 2016), such as intuition, which acts immediately without any deliberative process to understand a fact. Roeser (2011) and Espinoza (2003) argue that principles are perceived indirectly through the sensations caused in us, where intuition plays a fundamental role in having some notion of the observed fact.

Intuition

Roeser (2011) points out that twentieth-century intuitionists such as Nussbaum (2001) and Little (1995), whose roots lie in the thought of the Stagirite Aristotle, show that we arrive at a general principle through particular assessments. From this perspective, it is asserted that human beings are practical beings long before they are theoretical beings. That is, in order to achieve reliable beliefs, specific cases are required. Recognizing this procedure, by which a general law or a necessary truth is reached through the realization of particular assessments, as intuitive induction (Roeser, 2011).

Roeser (2011) and Espinoza (2003) argue that the tacit qualities of the observable, such as truth, correctness or the identification of some principle, are perceived indirectly from the sensations of the human being caused by the empirical fact. This assumes the full sensorial capacity to perceive them and with them a vague notion of it is achieved.

Regarding human sensoriality, in the case where “a person gives a sum of money to another”, the observable fact of “giving money” in the abstract has no value or virtue. But, based on the moral intuition of this action, one has the notion of the agent’s moral quality, of

being kind or responsible, corresponding to some principle, such as: helping someone is good or it is right to be responsible and pay off our debts.

Although the qualities of good, truthful, or responsible, for example, are inherent to people, we figuratively attribute them to the concrete fact. In the example, the action of “giving money” is then judged as kind, generous, responsible or correct. That is, as Roeser (2011) states, we assign the effect of the quality to the agent’s action. Therefore, we judge the observed fact as correct, good, or truthful.

From Roeser (2011) we can describe the following example, if we witness someone claiming that the light comes from our own planet Earth and not from the Sun, from cognitive intuition we determine whether such a statement is true or false. However, if someone without cognitive capacity were observing the same action described, then they would not understand the veracity of such an assertion. Thus, concluding that through cognitive intuition we determine whether the notion of some principle explains or gives knowledge of the action or from the observed fact. That is, if it is true that the light of our planet comes from the Sun.

Roeser (2011) and Lui (2016), among other intuitionists based on Aristotelian philosophy, comment that if there is doubt about the consequences of a principle in a particular situation, the solution is not located in a general principle or law, but in the circumstance itself and, above all, in the particular sensation linked to it. Examples of dubious arguments are the following:

Argument 1.

Premise 1 Any person that steals must be imprisoned .

Premise 2 Pablito, who is five years old, steals a bread because he is hungry .

Conclusion Therefore, Pablito must be imprisoned .

Argument 2.

Premise 1 Any person wants to help some body is a good person.

Premise 2 Juan wants to help Pedro who committed a robbery.

Conclusion Therefore, John is a good person.

In these examples, we feel that the deductions are uncertain, since it is doubtful that Pablito, that he has five years old, goes to jail for stealing a bread and that Juan is a good individual for helping someone who committed a crime. From such arguments, the decisive conclusion

is not in the application of any principle, but in the analysis of the factual premises and particular sensations (Roeser, 2011; Lui, 2016).

Regarding the dubious conclusions obtained from particular observations, the other sciences also provide exceptions that make the conclusion of the rule doubtful. For example, the exception to the octet rule of the valency of some elements such as Aluminum and Boron. Thus, the exception to Isaac Newton's third law in the presence of magnetic fields. These exceptions are understood, not by the applicable principle, but by the intuitive notion that makes us review and correct the principle based on the observed exception. Thus, the affective state and the sensations are those that dictate the fairness of the principle, recognizing that the intuition is cognitive.

It has been shown that intuition is a form of cognition. Where its contributory property is that which identifies what is not present or is implicit. In this way, Little (1995) establishes that the implicit principle of the observed fact is identified. An abandoned child is recognized in a crowd, a sad child among all those who laugh, a threatening person in the audience, a self-absorbed and worried person at a big party. Thus, according to Roeser (2011), a given intuition is a specific emotional form of cognition.

Sympathy

Following Liu's (2016) argument, we establish that cognitive emotions are complex rational states of approval and disapproval. Our speculative reasoning is not cold and dull, but by its nature is necessarily accompanied by affections and feelings that make us aware (Roeser, 2011). In this regard, benevolent affections, such as sympathy, make up an important part of our happiness and our knowledge is perfected by sharing our beliefs, ignorance and sensations (Liu, 2016).

Feeling some affective inclination towards someone affects having objective, non-reductionist knowledge of some action carried out by that person. For example, if we feel sympathy for someone who steals exceptionally due to hunger or another human need, our sympathy objectively tells us that the correct thing to do, in Pablito's situation, is to be merciful. On the contrary, in the case of not feeling sympathy or having antipathy towards Juan, this would tell us to be fair in the actions of Juan and Pedro.

In these situations, the particular emotions linked, such as sympathy, help us to know. Sympathy in the case of Pablito guides us to understand that one must be merciful and not be fair by simply applying a law. This rejects the application of reasoning, which excludes

all emotion, as is traditionally done in positivist logic. In which, then, justice would be applied to Pablito and an infant would be imprisoned. But if we feel sympathy for Pablito, the situation and the particular feeling towards the person who finds himself in such a situation are considered and a sentence is issued, having objective knowledge, what should be done (Roeser, 2011).

Thus, affective states are required to understand the complete configuration of a particular situation. What we feel sympathy for is deeply determined by what matters to us, even if we cannot intervene in it (Little, 1995). Following Roeser (2011), we can even establish that, if we have an affective inclination for celestial bodies, for atomic or molecular constitution, our affective state gives us a notion of the elements that constitute it.

In this way, the contributory nature of sympathy helps us focus on what is really important. For example, in the professional world of people, if we are engineers, the emotional state contributes to identifying right angles in the structure of a building or as biologists we recognize edible mushrooms from poisonous ones. In this way, through emotions we have sudden immediate knowledge about what attracts us. Thus, emotions act simultaneously, sympathy and intuition make us feel inclined towards something and an immediate notion about it.

Emotional Valencia. Pleasant versus disgusting

Regarding the sensation of attraction or repulsion, this is a property of emotions. In particular, emotions support the understanding of the phenomenon based on what we desire and find pleasurable. The complete particular situation causes us, through the pleasurable emotion, to value the sensation experienced as something joyful. In this way, through the emotion we register the vulnerability or strength of our particular impression (Roeser, 2011; Nussbaum, 2001).

Through this impression, we discover the factors of our pleasure and satisfaction or, conversely, those elements of our pain that prevent enjoyment are detected (Little, 1995). Thus, the emotional evaluation causes a response of pleasure, which makes us approach or move away if it is unpleasant, to pay attention or be disinterested in that knowable situation (Pérez and Redondo, 2006).

Through painful sensations we learn that fire burns, or through pleasant sensations we enjoy the gratifying sweetness of a fruit. Thus, the situation experienced is necessarily linked to suffering, recognizing the horrible and the painful; or it is intertwined with joy,

identifying the beautiful and the pleasant (Roeser, 2011; Nussbaum, 2001). Another example is identified with the recognition of death or the reunion of a loved one, which determines a painful condition or a pleasurable euphoria. This affectation is experienced every time the particular situation is recognized, real, evoked or imagined. Knowledge like this is usually as abrupt or impressive as the particular truths recognized. Thus, pleasant or repugnant evaluations discern the concordance between the particular situation and the principle (Roser, 2011; Nussbaum, 2001; Little, 1995).

Happiness and eudaimonia. The purpose of science

The importance of a shared goal is fully manifested when there is both convergence and divergence between individuals. In the example of the good of doctors, (Zavadivker, 2016) explains that, if the discussion takes place between a doctor from a regular health institution and another belonging to a terrorist organization, then the former will present the procedures to identify and prevent the means of contagion, while the latter will focus on the same means, but for a different purpose, to spread the virus among enemy peoples.

As can be seen, they agree on the knowledge of the means of propagation of the virus, but their debate about avoiding it or motivating it would be completely in vain, since the valuable ends of both are antagonistic and completely different. Zavadivker (2016) exposes another case, it would be inadmissible for two travelers to discuss which is the desired and predestined path to follow, both having different directions. Which end is more valuable, for which traveler?, depending on the sympathy that one has for one of the two or dependent, according to Protagoras, on the principle assumed about that in question (Samaranch, 1995).

The goal that makes a traveler or a doctor happy is different. Thus, the goal of human life is to achieve happiness. He even says that all philosophers and ordinary people agree with this goal, in saying that the purpose of human life is to achieve happiness (Dudley, 2018). In this regard, Dudley (2018) is right in stating that common sense and the philosophy of science fully coincide, the human being has happiness as his ultimate goal.

However, according to Aristotle more than happiness is eudaimonia, maintaining full development in life for as long as possible is the metaphysical foundation of the human being (Dudley, 2018). The most valuable thing for the human being, during each stage, adulthood, youth and, throughout his life journey, is to achieve his optimal state. This, from the Aristotelian perspective, is assumed as eudaimonia, as the highest goal of the human being and all knowledge must be directed to knowing how to obtain the optimal state for the highest

goal of the human being. Based on Dudley (2018) , it can be argued that the human being seeks his ideal environment. In this way, the excellent good environment of the human being is his greatest good.

We can add that human beings are not always in full development conditions; in adults, these are not the same as in youth, adolescence, or childhood. Thus, persons always strive to find their optimal condition and recognizing this optimal condition is the goal of knowledge.

Based on Dudley (2018) , which takes up the foundations of Aristotelian metaphysics, it is established that every human being seeks survival in his optimal condition. However, he cannot imagine it or see it, he will act seeking such a condition as his ultimate good. All human beings fight for their good and knowing the means to that good is human nature. In this sense, the good that human beings are capable of achieving is a pleasant sensation recognized as happiness.

Therefore, in the philosophy of science, the foundation is to understand how full human development is maintained and achieved. In order to understand the means to achieve what is desired, human beings use emotions, particularly those that serve to know the ideal means and achieve the maximum possible benefit. This last argument in favor of emotive cognition is based on the ancient Aristotelian conception called *prohairesis* .

Prohairesis . Fulfillment of the ultimate wish

Prohairesis is reconsidered for the realization of the final desire as the means to have knowledge and achieve the end of all knowledge (Liu, 2016). In this sense, more than the moral character, that establishes *prohairesis* is the realization of the final desire. A particular action at the precise moment and in the appropriate circumstances, after a deliberative passion (Liu, 2016). Prohairesis has two components, one deliberative and the other desiderative.

The desiderative component of *prohairesis* is usually assumed to be rational passion, although in particular it should be preferred as deliberative passion. In this sense, *boulēsis* was not yet a term in ancient Platonic philosophy, but Aristotle brought it closer to a more rational idea. Following Liu (2016), *boulēsis* for Aristotle implies three meanings, the end of deliberation (*boulēsis[e]*), the result of deliberation (*boulēsis[r]*), and *prohairesis* itself .

Thus, it is emphasized that, for Aristotle, *boulēsis* is about the end. This philosopher argues that desire is rather about the end. Therefore, we want the end, we deliberate and decide on everything that promotes it. But what is desired is first and foremost the end and at the same time, it is assumed to be good (Liu, 2016). In addition, the stagirite establishes two types of *boulēsis*, qualifying them as “by nature” and “contrary to nature. Thus, by their nature, the unjust desires injustice, the liar the lie and the insane the sickly. Contrary to nature, the unjust desires justice, the liar the truth and the insane the health.

From what has been argued, it seems simple to understand that first desire sets the goal and then deliberation turns the general, the unspecific and the indeterminate into something particular, specific and determined (Liu, 2016; Zavadivker, 2016). This particular, specific and determined conclusion is the *prohairesis* and it is a particular action at the precise moment and in the appropriate circumstances (Liu, 2016).

The other component of *prohairesis* is the deliberative one. Aristotle points out that we do not deliberate about ends, since the end is established for all, but about what promotes and directs the realization of the end. First, an end is established for all, non-specific and indeterminate through desire (*boulēsis*). For example, for a doctor it is to cure, for a teacher it is to teach, for a politician it is order; or, health or happiness can simply be the particular ends of the human being (Liu, 2016).

Once the goal has been established, deliberation is immediately carried out, seeking the optimal means to achieve the previously established goal. Here, Aristotle's precept of the midpoint is fundamental, the desire of the virtuous person to achieve the equidistant point among all particular circumstances, and it is then when deliberation is responsible for finding the ideal time, the correct way and the correct resources to achieve it. Therefore, the goal is what is desired and deliberation is a form of inquiry, which results in a *prohairesis* (Liu, 2016). We establish the following syllogism as an example of *prohairesis*:

- (a) I need some food.
- (b) A taco is a food.
- (c) I need a taco.
- (d) What I need to do I must do.
- (e) I make a taco.

In this syllogism, the end is the product of desire, desire dictates what ought to be done, and we immediately act accordingly. Here, the first premise, "I need food," is something produced by a direct sensation of hunger and not by any way of reasoning. The object that

satisfies the desire is immediately recognized. Thus a taco is food. Therefore, the object is identified by reason as an appropriate end to attain. So (b)-(e) represent a deliberative process, and (e) the conclusion, or *prohairesis*, is the immediate realization of a taco. In fact, this is the normal case. When we arrive at a *prohairesis* about what particular action ought to be done to promote the goal set by our *boulēsis*, we naturally follow this *prohairesis* and perform the action that is immediately practicable. This is also the sense when Aristotle says that decision and action are the same.

When we conclude in a *prohairesis* of the satisfied desire, the *eudaimonia* is momentary (Roeser, 2011). This optimal state is dynamic and is modified by another desire. Once our hunger is satisfied, we now wish to drink or sleep, this in accordance with the development of life itself. Thus, we all wish for something to be happy, the sympathy of someone, the acceptance of a family, to satisfy hunger, thirst, cold or another purpose. Wishing to maintain entire development in life for as long as possible, as Aristotle states, *eudaimonia* is the metaphysical foundation of human knowledge (Dudley, 2018).

Discussion

As has been explained, facts, goals and desires determine contradictions of our assumed precepts. Here, according to Roeser (2011), is where the utilitarian principle that seeks the most desirable over the unpleasant, provides the best possible result. Here it is well worth realizing that sometimes we do well and other times not so well (Roeser, 2011). As in all science, beliefs, principles, reasoning are wrong and far from the facts, but all of them sometimes are accurate.

Thus, relying on one's own beliefs is not very viable for achieving knowledge, but analyzing our assumptions based on those made by others is what makes it possible (Roeser, 2011). That is, interaction with others and paying attention to different points of view form an ideal means to be able to analyze our knowledge and improve it (Roeser, 2011).

The epistemological limitations of empiricism and positivism are thus recognized, regarding facts that by themselves do not prove anything (Horneffer, 2008). But they serve to demonstrate principles in the sensible world, to verify ideas in the light of the visible (Hernández, 2009b).

Furthermore, the assumption of evaluative, desiderative or prescriptive premises is also imposed on descriptive premises and their conclusions are viable. In this way, deductions from categorical, imperative and emotive statements lead to valid conclusions.

On the other hand, affective states, these being the emotions that support the procedure by which we know. Having the character of contributory, desiderative and valence, they support knowledge. Just as the simultaneous sensations of intuition and sympathy help to have a notion of what is knowable. Likewise, by the pleasant and the unpleasant we recognize what is good or bad for us.

From desire we pursue some goal, which may be happiness or eudaimonia, and from the realization of *prohairesis* we obtain some ideal state. Where the realization of desire is momentary and dynamic. This indicates the recognition of the affective capacities of the human being, his particular moral and emotional sense, such as intuition and sympathy, which help to have knowledge.

Likewise, perception, rationality, affective states and particular emotions help to generate a notion that is distant or close to reality, although our notions are only worse or better when referring to it or imagining it as distant or some accurate (Hernández, 2009a, b).

Conclusion

We have shown that conventional epistemology is wrong in judging both moral statements and emotions as unfounded and impractical. On the contrary, this research has demonstrated that moral statements, like emotions, produce knowledge. Thus, it has been argued that imperative and desiderative statements, as well as descriptive ones, deduce valid conclusions.

It was observed that rationalists and empiricists are far from being infallible. However, intuitionists and those who use their sensations also make mistakes. Thus, both the rational process of apophantic logic and Protagorean deduction establish that all deduction is valid, provided that its premises are also established as valid.

In conclusion, every emotional sensation must be recognized as the capacity to achieve wisdom of becoming and of all human understanding. As it is based on *prohairesis* of satisfied desire, the momentary and dynamic eudaimonia, which is modified by another desire. Also, recognizing that eudaimonia is the metaphysical foundation of knowledge.

Future lines of research

Emotions and moral reasoning have been shown to generate knowledge viability. Two particular emotions, intuition and sympathy, have also been shown to support knowledge generation .

On the other hand, it would be worthwhile to study the way in which emotions establish basic principles of survival and social nature in memory.

The memory process of what is pleasant over what is painful, both physical and psychological in nature, as anxiety. Addressing emotions such as fear, which makes us react and anticipate what distresses us, scares us and we try to avoid it.

In addition, it is necessary to investigate the influence that human groups have on the emotions, pleasant or unpleasant sensations of the individual, since the individual reacts according to the disposition of the group he belongs to or excludes in order to obtain their respective approval or to avoid their rejection.

Finally, the impact of some fundamental moral emotions on the process of knowledge remains to be investigated. The way in which guilt or shame makes us understand what condemns us or makes us see ourselves in an unpleasant or dishonorable way.

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