Interpersonal Intellectual Virtues: A heuristic Conceptualization from an Empirical Study

CLAUDIA E. VANNEY

Universidad Austral, Argentina
cvanney@austral.edu.ar
ORCID: 0000-0001-6757-3119

J. IGNACIO AGUINALDE SÁENZ

Universidad Austral, Argentina
iaguinalde@austral.edu.ar
ORCID: 0000-0001-7026-6638

Abstract. Due to the hyperspecialization so prevalent nowadays, interdisciplinary research is a demanding kind of epistemic activity. The concept of intellectual virtue as presented by responsibilist approaches of virtue epistemology could offer an effective counterweight to this challenge but raises the question of what epistemic virtues are necessary for interdisciplinarity.

Based on a qualitative study, we identify and heuristically conceptualize a relevant subset of epistemic virtues required by interdisciplinarity that we call *interpersonal intellectual virtues*. These virtues are personal character traits that facilitate the reciprocal acquisition and distribution of knowledge *with* and *through* other people. By their very nature, they are only exercised in an interpersonal relationship that seeks an epistemic good, so in some sense, they are at the intersection of social virtues and intellectual virtues.

We use Jason Baehr's four-dimensional proposal for the essential components of intellectual virtues (motivational, affective, skill, and judgment) to show that these interpersonal traits are indeed epistemic virtues. Some examples of interpersonal

intellectual virtues are intellectual empathy, intellectual respect, and intellectual trust, among others. Intellectual empathy is a paradigmatic case that we analyze in more detail.

Finally, we suggest that interpersonal intellectual virtues are the key character traits of people involved in any successful collective epistemic endeavor, interdisciplinary research being a privileged context in which we can clearly see their manifestation.

Introduction

In an age of hyperspecialization (Millgram 2015), interdisciplinary research poses a particular challenge for the experts involved in it as they must work together on a common problem that exceeds the scope of their respective epistemic backgrounds. One of its main difficulties, and the cause of many others, stems from the fact that in this type of research many dissimilar cognitive methodologies are used simultaneously by different researchers.

We can describe interdisciplinary research as a practice that, without denying the individual identity of the disciplines involved, results in the discovery of new knowledge with insights from different fields. In this epistemic activity, experts from various disciplines work in a joint manner on a common problem, engaging in a creative pluralism that requires them to share the way of thinking of others, and not only to learn new content from other domains. In a previous paper, we highlighted the importance of interpersonal relationships for the success of such collaborative teams. Moreover, for the researchers to undertake a task as difficult as this one, there must be a strong intellectual motivation given by a thought-provoking objective (Vanney and Aguinalde 2021).

Now, responsibilist accounts of virtue epistemology understand intellectual virtues as intellectually excellent character traits that involve both a motivational component and a component of success as essential to achieving the desired results (Zagzebski 1996). By emphasizing the cultivation of intellectual character, this approach allows for a better ap-

preciation of the personal conditions and thought processes that favor the pursuit of knowledge across domains. It also seems to have the potentiality of offering a counterweight to the bias imposed by hyperspecialization to the extent that researchers are able to develop specific epistemic capabilities required by interdisciplinarity. But what would these intellectual virtues be?

With the aim of identifying the character traits necessary to develop interdisciplinary research that bridges the "two languages" of the humanities (particularly philosophy and theology) and the sciences, i.e., scholarly investigations that bring together different epistemological emphases and levels of analysis, we conducted a qualitative study in 2021. In section 2, we will present a brief description of this empirical study, whose objective was to determine which intellectual virtues are the most relevant for interdisciplinarity according to certain key referents in that domain. A heuristic analysis of the information gathered led us to identify a subset within intellectual virtues that we call *interpersonal intellectual virtues*, and which we conceptualize in section 3. Since intellectual empathy is a clear case of this type of virtues, we analyze its main characteristics in section 4. Finally, in the conclusion, we suggest that interpersonal intellectual virtues are the key character traits necessary for any collective epistemic endeavor, but especially for interdisciplinary research, due to its particular features.

1. Brief description of the empirical study

In 2021, in-depth interviews were conducted with nine key referents with a long personal trajectory of interdisciplinary research between the sciences and the humanities. While the selected researchers are currently developing their scholarly activity in Latin American countries (Argentina, Chile, Mexico, and Uruguay), all of them also had participated at some point, for a considerable time, in research conducted in other regions, mainly in the US or in Europe. The academic background of the participants is the following: five of them have two separate and consecutive degrees in both philosophy and science (three in physics, one in biochem-

istry, and one in psychology). Of the remaining four, two are philosophers and two are neuroscientists. Although the university training of the latter was in a single discipline (philosophical or scientific), all of them were involved in interdisciplinary research between science and philosophy for several years.

During the interviews they were asked: (i) to describe their experience in interdisciplinary research; (ii) to estimate whether the interdisciplinary projects in which they participated were successful; (iii) to mention which personal characteristics of the researchers contributed favorably to the development of interdisciplinary research, and which ones had an unfavorable impact; and finally (iv) to indicate which of the mentioned favorable characteristics were considered by them to be essential for the success of their projects.

The interviewees mentioned twenty-two character traits (e.g., open-mindedness, intellectual humility, etc.) that contributed positively to interdisciplinarity. For eleven of them, they also mentioned their counterpart, exemplifying how the corresponding vice (e.g., close-mindedness, arrogance, etc.) had a negative impact.

Most of the positive characteristics reported by the interviewees can be classified into two main groups: (i) *intellectual* virtues, with open-mindedness and intellectual humility being the most prominent; and (ii) a range of *social* virtues, such as kindness, affability, courtesy, etc.

Within the first group, the interviewees recognized the positive impact of ten *intellectual* virtues. They noted, for example, the willingness to listen to conclusions drawn from approaches other than those of one's own discipline (open-mindedness), the awareness of the limits of one's own discipline (intellectual humility), and the desire to reach a deeper understanding of subjects from a different discipline (intellectual curiosity), among others.

Within the second group, the interviewees pointed out nine *social* skills that facilitate the good functioning of any teamwork in general, and consequently also contribute to the good functioning of an interdisciplinary team in particular.

Lastly, they mentioned three intellectual virtues (intellectual empathy, intellectual respect, and intellectual trust) that can be classified as being at the intersection of both groups since they are, by their very nature, intellectual and social. On the one hand, they differ from those of the first group by their interpersonal nature. Virtues like intellectual respect and trust, for instance, are *necessarily* interpersonal in their application –sharing this feature with social virtues–, while other intellectual virtues, like curiosity, *can* be manifested in an interpersonal way, but *not necessarily* –one could practice curiosity by taking an interest about some topic that no one else is considering. On the other hand, they differ from those of the second group by their intellectual nature.

This result heuristically suggested the need to develop a better conceptualization of this third group of virtues, which have been little studied so far. We have dubbed them *interpersonal intellectual virtues*, and their characterization is the main objective of this article.

2. Interpersonal intellectual virtues

The success of any research activity depends in large part on researchers having cultivated in themselves a rich array of intellectual virtues, such as open-mindedness, intellectual humility, and intellectual creativity. The relevance of these virtues for interdisciplinarity has been excellently analyzed in other articles in this monographic issue.

This paper will concentrate, then, on a set of virtues essentially linked to different aspects of human intellectual interaction in a collaborative group that we have termed *interpersonal intellectual virtues*. Virtues of this type have received little attention in the field of virtue epistemology, perhaps due to the fact that many epistemologists have been concerned largely with solving the problem of the criteria that justify the validity of knowledge attained *by the individual* (BonJour 1985; Chisholm 1989), and they have tangentially addressed the *interpersonal or social* aspects only to the extent that they influence the attributions of knowledge and its justification in the individual epistemic agent.

Some scholars have even tried to conceptualize intellectual virtues as essentially "self-regarding" or furthering the epistemic well-being of the individual inquirer rather than that of others. A prominent representative of this view is Julia Driver, who argues that every intellectual virtue should be understood as a character trait that reliably generates epistemic goods for oneself. In contrast, those virtues that reliably contribute to the flourishing of others would be moral virtues, but not intellectual ones (Driver 2003).

However, many virtue epistemologists have noted the overly restrictive nature of this conceptualization, pointing to the fact that numerous intellectual virtues may also have an other-regarding dimension (Kawall 2002; Battaly 2006; Roberts and Wood 2007; Baehr 2011; King 2021). Nathan King, for example, considers that intellectual virtues extend "not just to our *getting* truth, knowledge, and understanding, but also to our *keeping* and *sharing* them" (2021, 4). Likewise, Jason Kawall (2002) observes that in the case of an exemplary teacher, his pedagogical skills allow him to generate in his students a deep love of knowledge and a firm commitment to the study of the discipline he explains, which in turn increases the level of epistemic knowledge in his community. Those virtues that help the teacher in his educational task are evidently intellectual and, at the same time, other-regarding.

Kawall even goes so far as to suggest that such intellectual virtues related to the teaching-learning process may simultaneously have a self-regarding dimension because they also benefit the teacher, thus glimpsing the existence of intellectual virtues with a necessarily social component. In this sense, then, certain intellectual virtues can aim both at the benefit of the individual agent and that of the community to which he belongs. Hence many virtue epistemologists currently think that most if not all intellectual virtues are both self-regarding and other-regarding, given that they *can* aim at one's own or at others' share in epistemic goods.

Interpersonal intellectual virtues are also both self-regarding and other-regarding, but in a stronger way than other intellectual virtues because they focus on the *interpersonal relationship* in itself. These virtues help in the process of thinking *along with* others by making the social as-

pects of knowledge-seeking go well, regardless of whether that inquiry is aimed at the agent's own or another's share in epistemic goods. In other words, the distinction between self-regarding and other-regarding intellectual virtues concerns the end the agent has in mind (i.e., to gain knowledge for herself or for others), while the focus of *interpersonal intellectual virtues* is the process (i.e., one could only exercise these virtues while thinking alongside others).

Therefore, these virtues are in some sense at the intersection of social virtues and intellectual virtues because, like other intellectual virtues, they aim at epistemic goods (for oneself and others); but, unlike other intellectual virtues, their immediate sphere of application is necessarily interpersonal. Thus, interpersonal intellectual virtues can be defined as personal character traits that facilitate the reciprocal acquisition and distribution of knowledge *with and through* other people.

It is important to note that, although these virtues are closely involved with the social dimension of knowledge acquisition and distribution, they are character traits that are possessed *by the individual*, and in this sense, they are different from what some authors have termed *collective virtues*, i.e., virtues that can be attributed to a *group* or *institution* as such (Fricker 2009; Wright 2014; Lahroodi 2019). The literature on collective virtues is still relatively scarce, but it offers a promising approach to certain epistemological problems such as the theoretical task of understanding the different ways in which a group can possess virtues and vices, and the practical task of investigating how epistemic virtues can be cultivated within groups, while avoiding the negative impact that the vices of their individual members may have on their functioning. However, that would be a separate issue from the analysis of interpersonal virtues that we are presenting.

To show the specificity of interpersonal intellectual virtues, we will use the structural analysis of intellectual virtues proposed by Jason Baehr (2016). According to him, every intellectual virtue is constituted by four components or dimensions: (i) motivational, (ii) affective (iii) competence or skill, and (iv) judgment.

First, every intellectual virtue requires an intrinsic motivation to acquire, keep and share knowledge and attain the truth. More specifically, "intellectual virtues aim at understanding" (Baehr 2021, 124). This motivational dimension is also present in interpersonal virtues, given that an essential element to them would be the intrinsic motivation to pursue such epistemic goods *along with* others. More specifically, interpersonal intellectual virtues aim at achieving a joint understanding. For example, a physicist and a philosopher might be interested in determining the ontological significance of a certain theory of matter and, for that purpose, work in collaboration to discuss the issue and clarify it.

Second, the practice of any intellectual virtue must be accompanied by affective states which are appropriate to its specific type of activity, for example, feeling pleasure in asking questions or taking delight in solving a particularly difficult problem. Similarly, interpersonal intellectual virtues entail that the individual experience positive emotions in *interacting with or toward* others during the pursuit of epistemic goods.

Third, for each intellectual virtue, there is a skill (or a set of skills) that distinguishes it from other virtues. In the case of interpersonal intellectual virtues, they will always include some *interpersonal skills* in their characterization, for instance, "the ability to anticipate and extend the thinking of someone who presents a good idea before a group" (Aikin and Clanton 2010, 414).

Fourth, an intellectual virtue includes a dimension of judgment about when, to whom, for how long, and in what way it must be appropriately deployed. In the case of interpersonal intellectual virtues, the judgment will also deal with the concrete circumstances in which *personal interactions* occur, especially taking into account different types of mental states that the other person may have, such as (i) long-lasting dispositions (she is trustworthy), (ii) short-lasting emotional states (she is angry), (iii) associated desires or intentions, (iv) beliefs about the world, and (v) communicative intent (López, Arán, and Richaud de Minzi 2014).

Some examples of interpersonal intellectual virtues would be intellectual empathy, intellectual respect, intellectual trust, and the group-deliberative virtues classified by Aikin and Clanton (2010), like deliberative

wit and deliberative friendliness. In our view, intellectual empathy, which was mentioned in all the interviews described in section 2 above, represents a paradigmatic case, which we will analyze in the following section.

3. Empathy as an interpersonal intellectual virtue

While research on empathy from a psychological standpoint is quite voluminous, very briefly it could be said that psychology identifies two fundamental aspects in it: (i) an affective aspect described as *feeling like the other feels*, and (ii) a cognitive aspect described as *understanding what the other is experiencing*. For psychologists, the process of mentalizing, which refers to the ability to read the mental states of other agents (Frith and Frith 2006), corresponds to the cognitive aspect of empathy. As we will see in a moment, even though this psychological cognitive dimension within empathy is closely related to the virtue of intellectual empathy, it is not the same.

Recently, the philosophical interest in the study of empathy has also been growing (Coplan and Goldie 2011). Heather Battaly (2011), for example, has pointed out that folk psychology understands empathy *as caring, and/or sharing, and/or knowing*, noting that so construed it could be considered a virtue. However, she has also analyzed three widely held theoretical conceptualizations of empathy to show that all three lacked some essential elements necessary for empathy to be a virtue. The first conceptualization –*empathy as sharing by multiple means*– is a capacity, not a virtue. The second one –*empathy as sharing and knowing/mind-reading*– and the third –*empathy as knowing/mind-reading by multiple means*– are (if reliable) a skill, not a virtue. She concludes, nevertheless, by suggesting that any of these theoretical conceptualizations of empathy could be understood as a capacity or a skill that underlies at least some of the moral and intellectual virtues, as the folk concept of empathy implies.

From a social epistemology perspective, other authors have proposed to consider empathy as a group deliberative virtue. For them, *deliberative empathy* is "the willingness to consider viewpoints and motivations very different from one's own" (Aikin and Clanton 2010, 416). It is interesting

to note that this conceptualization is quite close to the notion of open-mindedness generally used in virtue epistemology (Baehr 2013).

In our view, a new theoretical concept of empathy, which incorporated Baehr's four dimensions of epistemic virtues, would allow us to consider intellectual empathy as an interpersonal intellectual virtue. Moreover, this conceptualization would also allow us to show that intellectual empathy is a different virtue from open-mindedness.

For this purpose, we will introduce the following distinction. In the study of knowledge, some philosophers have proposed to distinguish two components of knowledge as an operation, namely: the cognitive operation in itself (*methodical* component) and the content known (*thematic* component). Between both components, there is a perfect adjustment. That is, no theme appears without accounting for the cognitive method that leads to its consideration, and there is no cognitive operation that does not delimit its theme in a precise manner (Polo 1987, 87).

This distinction is relevant for the analysis of empathic knowledge because it allows us to define intellectual empathy as a habit that perfects the intelligence in order to step into the mind of another person in a two-fold manner: either (i) to understand *the way* in which they are understanding (*methodical* approach), or (ii) to see things *from their perspective or point of view* (*thematic* approach), or both.

Now, if we apply Baehr's four-dimensional analysis of intellectual virtues to this conceptualization, we see that intellectual empathy can be considered, in fact, an interpersonal intellectual virtue, which is a broader concept than the cognitive component of empathy studied by psychology.

First, the motivational dimension of intellectual empathy is two-fold and can refer to the desire to grasp either (i) the way in which another person is understanding (methodical approach), or (ii) the point of view of another person (thematic approach), or both. On the one hand, the methodical approach is particularly important for interdisciplinary inquiry and occurs, for example, when a researcher desires to grasp the way in which another researcher is thinking to attain a shared awareness of a joint understanding. In the interviews, one of the researchers mentioned the following: "It's about me being able to understand what the

other person is understanding about what I'm saying to him". On the other hand, the thematic approach occurs, for instance, when a teacher tries to understand the perspective adopted by a student to better figure out how to formulate a particular point or claim.

Second, the affective dimension of intellectual empathy is reflected in certain emotions or in the pleasure experienced when realizing that those involved in the interpersonal cognitive process achieve a joint understanding. We found many examples in the interviews referring to different emotions that emerged during the interdisciplinary dialogue. For instance, one of the interviewees described interdisciplinary work as "letting myself be *surprised* by the perspective on the same topic that the other person has." Another interviewee stated: "I´d learn many things from him and, at the same time, he was absorbing with *great delight* many things that I´d explain to him." And in a more metaphorical way, another asserted: "If I *enjoy* playing your game, I can adapt mine to yours so that we play together."

Third, intellectual empathy is constituted by two main skills: (i) cognitive flexibility, i.e., the ability to recognize the *cognitive method* used by another person when they approach a subject and then adapt to it, and (ii) perspective-taking.

Many examples were given by different interviewees when they described these abilities as follows: (a) "Two people who come from different epistemological universes must have the cognitive flexibility to be able to move in the other language, even if they do not fully master it". (b) "It requires a certain capacity for adaptation and tolerance because we are obviously going to have to change the way we do things, from everyday things to the way we do research." (c) "It is to put oneself in other people's place in an epistemic sense, in the sense of perspective, in the sense of trying to know what the other knows. In other words, you must try to put yourself in the other's place in order to see the problem from the other's perspective".

Fourth, the judgment dimension is present in intellectual empathy as well. For example, when dealing with those personal interactions in which the goal is to reach a joint understanding, the judgment might take into

consideration the other person's concrete epistemological background and regulate when it is appropriate to ask them to try to change their cognitive methodology and when such effort should be made by oneself. Another example would be to moderate one's own desire to know about the other discipline and to determine the degree of precision to which one needs to arrive at a given exchange. Thus, the judgment dimension of intellectual empathy must consider many such circumstances related to the mental states of other people.

In short, the proposed concept of intellectual empathy exhibits the four components that an interpersonal intellectual virtue requires.

Finally, let's see how intellectual empathy and open-mindedness are different virtues, despite their similarities. As we mentioned before, intellectual empathy, like all interpersonal virtues, involves *necessarily* an interaction with other people. This is not the case with open-mindedness, because even though open-mindedness *can* be manifested in an interpersonal way, that is *not necessary* –one could practice open-mindedness, for example, by thinking about some alternative perspective that no one holds. In turn, a comparison of the motivational dimension of both virtues also helps to distinguish them. Open-mindedness considers the merits of alternative views with an eye to giving them fair and honest consideration, and it involves a willingness to change one's mind, if one finds that the alternative viewpoint is more plausible. By contrast, intellectual empathy can consider either the way and the point of view in which another person understands, but it needn't involve an *assessment* or *evaluation* of another person's statements, nor *changing one's position* in response to such an assessment.

Conclusion

The application of virtue epistemology to the problem of interdisciplinary research revealed the existence of a subset of intellectual virtues that we call interpersonal. By their very nature, these virtues can only be exercised in an interpersonal relationship that seeks an epistemic good.

Since interpersonal intellectual virtues ultimately aim at epistemic goods, they are like other intellectual virtues. However, they differ from other intellectual virtues because their immediate sphere of application is necessarily interpersonal, a feature they share with social virtues. In this sense, interpersonal intellectual virtues can be considered as standing at the intersection of social and intellectual virtues.

Intellectual empathy is a paradigmatic example of interpersonal intellectual virtues. It manifests itself in two ways: methodical and thematic empathy. Although intellectual empathy is very close to open-mindedness, the interpersonal nature of intellectual empathy clearly distinguishes it from open-mindedness.

We suggest that interpersonal virtues are the key character traits of people involved in any collective epistemic endeavor, interdisciplinary research being a paradigmatic context in which we can clearly see their manifestation.

Acknowledgments

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