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# Empersonal Research Practices: Getting to Know Our Interdisciplinary Collaborators

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**Abstract.** Collaborative research is quite common in contemporary society; indeed, it may be thought that scientists cannot live without it. Yet, it seems difficult to engage in good interdisciplinary collaboration when research methods and background assumptions often differ widely. I suggest in this paper that a disposition to inquire into another person is essential to good collaborative research. I first explain what I mean by "empersonal inquisitiveness" and why it is important in interdisciplinary collaboration. Inquiring into a person serves as an important precursor to engaging in interdisciplinary collaboration, because it allows researchers to form shared frameworks and develop a shared plan for the research project. I then discuss social-cognitive mechanisms and their ability to generate knowledge of other persons. In the final section of the paper, I explain how social cognition can allow persons to engage in truly collaborative projects, in particular by way of shared mental models and shared reasoning. The result is that empersonal inquisitiveness, when employed by potential research partners, produces important empersonal knowledge that advances collaborative research.

**Keywords:** collaboration, inquiry, intellectual virtue, knowledge of persons.

## 1. The Need to Get to Know One Another

Alkis Kotsonis (2021) has recently argued that epistemic collaborativeness is a valuable character virtue in human persons. For Kotsonis, epistemic collaborativeness is a character trait constituted by "the disposition to pursue intellectual collaborative activities (when appropriate) out of a desire for epistemic goods and the ability to engage in such activities skillfully" (Section 2.2). Intellectual collaborative activities are best understood as intellectual endeavors involving shared agency–multiple agents working together to achieve one or more shared aims. Having a tendency to engage in joint epistemic endeavors sounds like a virtue, no doubt. But how exactly should we understand the "ability to engage in such activities skillfully"?

One starting point for being capable of engaging in epistemic collaborations skillfully is, I want to suggest, being disposed to inquire into other persons, specifically those with whom we plan to collaborate. When we spend time getting to know a fellow collaborator as a researcher, including her unique methods, tendencies, and beliefs, we can articulate and nuance our shared aims in collaborative research. When we inquire into another person, we can make shared plans with her on the basis of our new understanding. When we focus on the *person* at the start, rather than the research, we are better able to clarify, question, and improve the research.

One's research project is always limited by the person in question–her assumptions, her background, her intellectual capacities, her natural talents, her developed skillset, and her interests and other motivations. When several people come together on a research project, all of these same limitations are now brought to bear on the same research project. It would be absurd to think that the research plans could be developed and understood without reference to the persons involved. Moreover, precisely because several people are involved, each must understand the others in order to work with them to refine and implement the project. Therefore, the starting point for collaborative research projects is a tendency to get to know one another, in the sense necessary for good research. Let us call the disposition to attempt to understand another person *emperson-*

*al inquisitiveness*, i.e., the tendency to inquire into a person, rather than, say, a research topic.

These facts give reason to think that the virtue of empersonal inquisitiveness is important for any collaborative research program. Collaborative *interdisciplinary* research, though, is specially placed to benefit from this virtue. At the risk of sounding redundant, interdisciplinary research involves researchers across disciplines; this implies that researchers come from diverse backgrounds, use varying methods, and begin with different (and sometimes opposing) assumptions and questions. A biologist and a philosopher may be interested in the same topic, but they will likely come at the topic from different angles, asking different questions and often using differing terminologies to articulate those questions. Moreover, the biologist and the philosopher will use different tools to answer their questions. Thus, when they come together to work on a project, they are often not able to immediately begin the research. When two biologists work together on a project, in contrast, they may be able to begin working within a few hours of meeting. So, interdisciplinary collaboration requires some special prerequisites before the project can even begin.

Interdisciplinary research can plausibly benefit when it is collaborative in this way, so that research products are more coherent across disciplines, and methods and terminology are not ignored or misused. To be collaborative in a way that helps interdisciplinary researchers, though, requires exercising the virtue of empersonal inquisitiveness.

One may think that the only thing needed for good interdisciplinary collaboration is to explicitly clarify what is otherwise obscure prior to research activities–i.e., what questions should we ask, what terminology should be used to ask and answer those questions, what research methods and tools should we use, etc. Yet, to even answer these questions, we must learn about the specific methods and tools, interests and motivations, terminology and assumptions, etc. And we can only learn those specifics by learning about the person with whom we plan to collaborate. That is, we must learn about the person, how she thinks, how she works, and who she is as a researcher. When we are disposed to do this, we are at the starting point of good interdisciplinary research.

Empersonal inquisitiveness is not only something done prior to research – it is both a prerequisite and a component of collaborative research. It is exercised in activities such as discussion, negotiation, and shared agency. Empersonal inquiry does not merely take place at the level of explicit testimonial exchange, either. We can learn important things about others through nonverbal communication, and empersonal inquisitiveness as a virtue requires the proper exercise of these types of communication as well. Call these nonverbal communications the *social-cognitive components* of empersonal inquiry, in contrast with the verbal components that allow us to gain knowledge through testimony. Though both are important for getting to know a person, social cognition is, in my view, especially important for those interested in the habituation of intellectual virtues. For this reason, the remainder of this paper will focus on the social-cognitive components and their relevance to interdisciplinary collaboration.

## 2. How to Get to Know One Another

I want to focus now on how the virtue of empersonal inquisitiveness may be exercised cognitively. It will turn out that certain social-cognitive capacities are at the core of inquiring into a person; given what I have argued in the previous section, then, we should develop a disposition to exercise those capacities when we aim to collaborate across disciplines. Furthermore, those same capacities are often at the very core of such research, as shown by empirical studies of collaborative work in the classroom. The result is that social cognition is needed for people to develop collaborative interdisciplinary plans and to work together on those projects.

What is social cognition? Consider a trial-run definition: social cognition is anything happening in the mind that requires the integration of the content of another mind. De Jaegher and Di Paolo (2007), for instance, understand social cognition itself as a kind of social interaction, specifically as a type of coordination. When I am interacting with someone, social cognition is required for us to coordinate our actions. When I want to understand Susy's behavior, I need to use social-cognitive capacities of my

own to produce knowledge about her reasons for acting. That is, to understand Susy's behavior, I use my own social-cognitive capacities to learn about Susy's mental states. Social cognition, then, is just my own cognition whose object is someone else's mental activity. Let us look at some specific types to see how they play a role in coming to know a person.

### 2.1. Mindreading

One type of social-cognitive capacity is mindreading, which involves a specific kind of attribution—mental state attribution. Mindreading is often understood as the ability to detect another person's reasons for acting. More broadly, mindreading is detecting another person's mental state at a given moment in time. For example, if I notice you roll your eyes as you listen to a lecture, I may come to understand your cognitive attitudes in that moment. This may occur without your ever knowing I am mindreading you, and without my conscious effort to do so.

I suggested in the previous section that empersonal inquisitiveness is important for interdisciplinary collaborative research. Mindreading is clearly an important component of empersonal inquiry, as it is a way of coming to know a person that often supplants longer, more cognitively demanding conversations. Thus, mindreading is likely to play an important role in collaborative interdisciplinary research, as it would with collaboration in general. How might mindreading relate to interdisciplinary collaborations in particular?

Consider a case of a neuroscientist working on brain activity during religious experiences, and a theologian studying the reports of religious experiences and their connection to religious doctrine. Suppose they plan to work together at the intersection of those disciplines, rather than merely studying religious experiences in isolation. They will need to develop shared aims, which are only possible within a shared framework of understanding the concepts used in such research; mindreading is one of the starting points for building the shared framework. If the neuroscientist and the theologian have differing, even perhaps opposing, views on how best to fix the concept *religious experience*, then they will be unable to work together on research in any meaningful way. They must get to

know one another through mindreading, for instance, in order to understand how each thinks about the concept and its connection to his field of study. This is not likely to happen merely by reading previous research on the subject–the thoughts and beliefs of the researchers are too nuanced to be reported in a journal article.

At its best, such collaborative research is not merely a division of cognitive labor it is genuinely shared inquiry. Shared agency occurs when persons working together perform one singular activity, in service of their shared aims. When we engage in shared *epistemic* activity, such as collaborative interdisciplinary research, our shared aims are epistemic in nature. Consider how it would be possible to share epistemic aims. First, social-cognitive mechanisms allow us to form knowledge of and relations between other persons. When we mindread others, we gain such things as common knowledge and mutual understanding. Common knowledge and mutual understanding, which work together to form a shared framework between researchers, are likely requirements for genuinely collaborative research. That is, we cannot share epistemic aims with other persons if we cannot build a shared framework based on shared knowledge. Interdisciplinary collaborations require shared aims and shared plans; developing shared aims requires a shared framework, which is efficiently produced through mindreading and other social-cognitive mechanisms.

Mindreading also plays a role in the practice of such research, but here my goal has been to show how mindreading plays a foundational role in allowing us to get to know our fellow inquirers. I have focused on this role because empersonal inquiry allows us to develop the shared aims and plans that are desperately needed, and often the most muddled, in interdisciplinary research. When researchers from different fields attempt to work together, they often do not realize how varied their background assumptions and practices are. We sometimes find researchers dispersing over time, working in isolation, with lip service (in the form of a footnote or acknowledgement) to the research being done by their fellow "collaborators." Mindreading is a foundational mechanism that allows us to get to know one another so that we can recognize those differences and develop strategies for negotiation and compromise. We can work toward build-

ing a shared framework by mindreading one another and using this new knowledge to properly discuss issues and negotiate plans.

### 2.2. Perspective-Taking

Perspective-taking is a kind of social cognition similar to mindreading (and often mistaken for mindreading). If mindreading is characterized by the attribution of mental states to other persons, then perspective-taking may be characterized by the pretense of another's (real or imagined) mental states or physical position. An agent could have various reasons for doing this, but a common reason seems to be that humans want to better understand the mental states of others or the actions of others. This is different from merely attributing mental states to others. Since the physical aspects of an agent, the physical aspects of the world, and the mental attitudes of an agent can all play a role in the perspective of that person, it seems reasonable to think that we can gain understanding of her mindset by thinking as though we were in her position. This is perspective-taking–taking up the outlook of another person, including her beliefs, maybe her physical position, her past experiences, etc., in order to better understand something about her and her perspective.

Perspective-taking is not merely me *noticing* all these facts about the world. Perspective-taking involves me actively taking another point of view with respect to all these known facts – I may pretend that I am in your position with respect to all these things, or I may try to pretend to be you *being* in your position with respect to all these things. In altering my own point of view regarding your cognitive and conative attitudes, your past, and your physical standpoint, I am better able to judge your decision or your beliefs.

Consider how this might work in interdisciplinary research. A biologist, Susy, is studying the effects of certain smells on mice; a philosopher, Jeff, is trying to determine if essentialism about biological kinds is compatible with evolutionary theory. If, say, the two researchers want to work together on an interdisciplinary project that bridges these two independent projects, then each will need to learn about the other's beliefs and practices, taking on one another's perspective while engaging with

the research. Suppose Jeff is learning more about Susy's lab practices, and he is confused about why Susy would give the mice a maze test just before they smell the substance. Jeff can use his background knowledge of Susy and her other practices to take on her perspective, in an attempt to better understand her reasons for giving the mice the maze test. Importantly, just because Susy may explain verbally to Jeff why her research is designed this way does not mean that Jeff can come to understand and accept her reasons. Jeff may need to take on her perspective in order to see for himself that such a practice makes sense.

Jeff's seeing for himself the purpose of such practices is important for Jeff and Susy to work together on the shared project. It allows them to determine the appropriate strategies for the collaborative project. If Jeff takes on Susy's perspective, then he may find reasons to stop the practice of testing the mice, reasons that override her verbalized reasons for performing it. Perspective-taking, rather than merely accepting or rejecting her verbalized reasons, allows Jeff to get to know who Susy is as a researcher. As is suggested in the empirical literature on social cognition, getting to know each other qua researcher will allow them to work together more efficiently on the project. Hoever et al. (2012), for instance, discusses empirical studies linking perspective-taking with information elaboration and creativity within groups. Grant and Berry (2011) also show that perspective-taking offers epistemic benefits to inquirers.

In general, then, perspective-taking helps us develop habits of interaction, as well as explicit plans, in collaborative research. Both the natural formation of an implicit procedure, as well as the (implicit or explicit) decisions to alter or update the procedure, seem to occur through perspective-taking. Indeed, it is unclear how implicit procedures and habits of interaction might be formed without perspective-taking. Even when plans are laid out explicitly in advance, for instance, discussion and negotiation are used in planning to set standards and procedures. This process of planning, as well as the implementation of the plan, requires taking on the perspectives of others to understand whether and why their reasoning is sound or their conclusions justified.

The only way to negotiate on a set of plans and standards is to come to see why other researcher's ideas are worth incorporating into the plans; this will likely involve perspective-taking, especially in interdisciplinary collaborations in which we do not already share the same perspective. Perspective-taking, therefore, should be performed to facilitate good planning and eventually good interdisciplinary collaboration. Researchers who wish to collaborate must have the associated disposition to engage in empersonal inquiry of this sort, otherwise collaborative research will begin without the proper foundations.

### 2.3. Social Cognition in Empersonal Inquiry

The result of this discussion is that social cognition plays a role in coming to know a person. In general, social cognition involves schematization, which we can understand as a way of organizing information and creating a network of connections. Social cognition also involves a kind of attribution to other agents, e.g., attribution of beliefs, reasons, and other doxastic states. Persons also attribute processes of reasoning to others, such as processes of explanation and analysis. We also attribute non-doxastic attitudes to others, such as hopes, fears, plans, etc., and certain cognitive characteristics or psychological personality traits.

All of these cognitive mechanisms combine to generate knowledge of other persons. When we inquire into another person, we should make use of social-cognitive capacities, rather than merely relying on testimony, stereotyping, or assumption. These social-cognitive capacities are developed and improved upon as a person develops the virtue of empersonal inquisitiveness; they are exercised well when a person engages in excellent empersonal inquiry.

It may be thought that social cognition cannot be part of the exercise of a virtue, on the assumption that such cognition is beyond our control. There are two important ways to reply to this concern.

First, Shannon Spaulding distinguishes between low-level and high-level social cognition. Low-level social cognition is immediate, subconscious, and strictly neural. High-level social cognition is "mediated by psychological concepts, relatively slow, and subject to conscious control"

(Spaulding 2018, 65). I can, for instance, share attention with you during a musical performance without ever realizing that I am cognizing about your thoughts, beliefs, or attitudes. In this case, everything that occurs when we share attention occurs beneath the surface, subconsciously. I can, alternatively, use my social-cognitive capacities intentionally, e.g., if I want to understand your behavior because I am confused by your actions. I may intentionally try to simulate your mindset, your circumstances, and your preexisting beliefs, so that I can learn why you acted the way you did. This would be a kind of perspective-taking, and it occurs consciously and intentionally. It seems that many, if not all, types of social cognition can occur at lower levels or higher levels, and both forms are essential to getting to know another person.

Second, unconscious as well as conscious social cognition can be trained as part of the virtue of empersonal inquisitiveness. We can understand this virtue as the developed tendency to engage in social cognition (and/or verbal communication) in whatever form is appropriate for the situation at hand, with respect to the right persons and for the right ends. It is plausible, though, that we can be habituated to engage in immediate and subconscious social cognition as well as conscious social cognition. Just as we can be habituated to consciously reserve time each morning for teeth-brushing, but we can also be habituated to brush both upper and lower rows of teeth without even thinking about it, so too can we develop good habits with respect to both high- and low-levels of social cognition. In the case of social cognition, this habituation may require the conscious exercise of social-cognitive capacities until such time as many of them become immediate and unconscious, or it may involve consciously doing something that causes the activation of an unconscious social-cognitive mechanism. Either way, both immediate and mediated social cognition should be regarded as components of empersonal inquisitiveness, when exercised properly.

## 3. What We Can Accomplish by Getting to Know One Another

Thus far, we have looked at types of social cognition that allow persons to exercise the virtue of empersonal inquisitiveness. In this section, I want to show how one type of social cognition, shared reasoning, allows collaborators to engage in good interdisciplinary research. This type of social cognition depends on persons knowing one another, and having shared representations founded on such knowledge.

First, truly *collaborative* research, unlike divide-and-conquer strategies of interdisciplinary research, requires shared reasoning. To show that this is true, we first need to see what exactly it would mean to reason in a shared manner. Human reasoning may involve the use of logical forms or other rules, but typically, human reasoning involves building, structuring, and manipulating cognitive representations, or mental models (see Johnson-Laird and Byrne (1991), Byrne (2005), and Johnson-Laird (2006)). For example, a mental model, which is an individual's representation of a certain part of reality, may be used to make inferences about physical space, temporal events, logical or causal connections, etc.

Shared reasoning, then, also involves mental models, and different agents may have differing models when reasoning about something together. But shared reasoning can still occur even when agents do not have an identical representation of that about which they are reasoning. As Paletz and Schunn note about teamwork, "Mental models can be more or less shared, some *aspects* of a model can be unshared, and a team can share some mental models but not others. Whether different mental models (or aspects thereof) are shared may also be more or less problematic" (Paletz and Schunn 2010, 85). Shared reasoners need to have a shared mental model that is foundational to their inquiry, similar enough that they can engage in inquiry together (see Jonker, van Riemsdijk, and Vermeulen (2010) for a detailed description of shared mental models). They can reason together because they have a shared framework for how and what to reason about.

Shared reasoning occurs when people make inferences, often generating new representations, on the basis of shared representations, i.e.,

mental models, that they held prior to collaboration. When researchers engage in shared reasoning, and shared inquiry in general, they do not engage in those cognitive activities in isolation from other cognitive mechanisms or in isolation from fellow collaborators (see Salmon and Zeitz (1995) for further explanation of shared reasoning). Suthers (2003) confirms this when looking at representations formed during collaborative inquiry in the classroom. So, when interdisciplinary research aims at genuine collaboration, it will involve shared reasoning, which is dependent on shared mental models.

When researchers as different as those across disciplines, with different tools and methods, different ways of understanding concepts and asking questions, come together to produce shared mental models so that they can reason *together*, they must first engage in empersonal inquiry. Sharing representations with other people requires background knowledge of them, which we gain by exercising the virtue of empersonal inquisitiveness. So, for interdisciplinary research to be truly collaborative, involving shared representations and shared reasoning, knowledge of other persons gained via empersonal inquiry must play a role in the planning and implementation of such research. When we inquire and come to know other people, we can then form shared mental models and reason using those models; these shared representations may very well play a crucial role in the success of interdisciplinary research.

The positive effects of shared reasoning are borne out in other forms of collaboration. De Backer, Van Keer, and Valcke (2022) report the epistemic benefits of socially shared regulation, in which inquirers must interact with one another to gain shared understanding, regulate the strategies and plans of the inquiry, and control and regulate the learning process. As they put it, "when students co-construct common learning objectives or mutually monitor and control each other's comprehension, the group's progress, peers' motivational strategies, or contextual task demands", they are engaged in shared regulation (De Backer, Van Keer, and Valcke 2022, 2). All of this plausibly requires getting to know one another beforehand, including one another's research practices and background beliefs, methodological frameworks and potential biases. Moreo-

ver, this shared reasoning process is made more efficient by maintaining the disposition to empersonally inquire during such collaborative efforts. This example sheds light on the role of empersonal inquiry in collaborative interdisciplinary research, in part because students in the classroom may have varied assumptions and methodological ideas more than, say, two chemists working in the same lab.

Getting to know our fellow collaborators prior to such research provides us with the tools needed to engage in high-quality collaboration. This is especially important at the intersection of science, philosophy, and theology, given the important differences between the fields. Special care must be taken to ensure that such interdisciplinary research does not reduce to "talking past" one another, or worse, dissipating into separate research projects that only nominally relate to each other. Empersonal inquiry can help us to engage in effective shared reasoning, which in turn helps us to engage in genuine collaboration.

## Conclusion

The result of this discussion is that interdisciplinary collaborations are particularly in need of the virtue of inquisitiveness into persons. Such inquisitiveness, when exercised, results in the activation of social-cognitive mechanisms that are helpful for gaining knowledge of persons and participating in collaborative research. Empersonal inquisitiveness is important for beginning collaborative research and for continuing to work effectively together during such research.

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