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Three criteria for virtuous collaboration across epistemic practices: a case from sentimentalism and Field Environmental Philosophy

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Abstract. The present paper proposes three desiderata that methodologies for collaboration between philosophy and ethnobiology should satisfy. The account considers that a focus on a sentimentalist virtue epistemology is necessary to effectively address problems and challenges in such collaborations. Our focus on sentimentalism is further elaborated through three desiderata: (D1) The context of the collaboration should encourage receptivity among practitioners; (D2) collaborations should aim to produce knowledge that addresses the problems faced by stakeholders; and (D3) relevant communities and collaborators for each case should be included by attuning to the conditions of the collaboration. To support our argument, we present the methodology of Field Environmental Philosophy as a case study in which attention to these desiderata is thoroughly

present, resulting in a successful collaboration. We argue that these desiderata are crucial for understanding collaborations between philosophy and ethnobiology.

Keywords: interdisciplinary collaboration, sentimentalism, ethnobiology, philosophy, epistemic virtues.

Introduction

The question of how philosophy and ethnobiology can collaborate presents multiple challenges related to identifying criteria and methods for achieving felicitous instances of collaboration. Problems facing any kind of collaboration comprise issues such as finding a common language across disciplinary (and other types of) aisles, finding compromises between different criteria for varied types of assessments (evidential, ethical, etc.), making the results of collaborations appropriate for the problems they were made to address, coordinating different rhythms of work and the time it takes for each collaborator to make contributions, among many more. In the case of philosophy and ethnobiology, given the conceptual and practical distance between these disciplines, and the fact that their collaboration is motivated, as seen by us, mostly by a background of multiple ecological crises, we lay their problems under two main headings: (1) *The problem of collaboration instability*, how to manage disagreements and the possibility of communication breakdowns that may arise due to their differences; (2) *The gaps-of-collaboration* problem, how bridges across these practices can breach gaps between elements from both differing in levels of abstractness and generality, together with maintaining an appropriate connection to the concrete problems tackled by collaborations. Addressing these challenges, we argue for a sentimentalist virtue epistemology to assess collaborations. At the core of sentimentalism are two

main epistemic virtues: receptivity and decisiveness. Adapting sentimentalism to the issue of developing methodologies for collaboration, we argue that collaboration across disciplines should consider three desiderata: (D1) The context of the collaboration should foster receptivity among its practitioners; (D2) collaborations should be tailored to produce knowledge that targets the problems faced by stakeholders; and (D3) the relevant community and collaborators for each case should be included with sensitivity to the conditions of the collaboration. We introduce Field Environmental Philosophy (FEP) and its methodology to show that paying attention to these desiderata results in a successful collaboration. FEP is a framework for interdisciplinary collaboration and education practiced at Chile's Omora Ethnobotanical Park. Through the arguments and the case study of FEP, we defend these three desiderata as a blueprint for future collaborations between philosophy and ethnobiology.

The structure of the work is as follows: in Section 2 we start by positing two central problems that face any collaboration, but specially collaborations between ethnobiology and philosophy. These problems are, first, the problem of collaboration instability, i.e., how to manage disagreement, different disciplinary criteria, and the inherent instability of collaborations. Second, we look at the gaps-of-collaboration problem. We will focus on the problem of connecting theoretical and epistemic matters with concrete issues and practical concerns, which is particularly pressing for the collaborations we have in mind, as they are happening on a background of multiple social and ecological problems. We follow this initial problematization with the presentation of a sentimentalist virtue epistemology (Slote 2018), as its focus on agential and attitudinal dispositions results particularly useful for tackling the previously mentioned problems. This is because it avoids commitments to rigid metaphysical, epistemological, or disciplinary criteria that might become points of contention. We wrap up Section 2 by translating the virtues of sentimentalism, which we

will flesh out as the virtues of receptivity and decisiveness, into more specific criteria that methodologies for collaboration should embody. In Section 3 we introduce the methodology of Field Environmental Philosophy, as it proves to be a methodology for collaboration between philosophy and ethnobiology that complies with the desiderata considered and thus supports felicitous collaboration. This presentation also helps to showcase how the desiderata and their inclusion can look like in practice. Through the framework presented and the case of Field Environmental Philosophy we hope to present a blueprint for future collaborations involving the engagement of philosophy and ethnobiology.

2 Collaborating Across Epistemic Practices: Some Initial Considerations

The collaboration between philosophy and ethnobiology can be characterized by a broad diversity of activities. These range from interchanges just involving the sharing of concepts and theories to more substantive instances where there is a joint pursuit of shared goals. We consider even minimal forms of collaboration, e.g. practitioners from both traditions engaging in open-ended conversations, of which the outcome is unforeseeable. Collaborating across epistemic practices¹ presents significant challenges that require a nuanced understanding of the complex background in which such interaction takes place. Furthermore, it demands a set of crucial attitudes that practitioners must adopt to ensure that the collaboration is fruitful and impactful. This section aims to outline the challenges that must be addressed to make collaboration work and the role of a sentimental virtue epistemology in that.

2.1 Issues for Collaboration: Common Ground, Instability, and Concreteness

A key aspect of collaboration is that it not only needs to involve common assumptions about goals and background information, but also a common understanding of the practical means to achieve the proposed goals. Thus, different methods and dispositions² to define common grounds between the collaborating parts must be analyzed both by the agents involved in a collaborative practice, in order to secure its effectiveness, and by researchers who want to study the notion of collaboration, as well as particular instances of it. The role of philosophy is crucial regarding the analysis of a general notion of collaboration (e.g., inquiring what challenges collaborations face in general), but its contribution may appear obscure in practice if it fails to apply the abstract outcome of its analysis to concrete cases of collaborative interaction. So, regarding epistemic practices, such tasks (establishing a common ground and analyzing collaboration) could be particularly challenging. For, apart from questioning and analyzing common goals and background assumptions, we may also question the means themselves through which collaboration is supposed to happen. Notably, the background may be conceived not primarily or not only as part of the content believed and the information it comprises (that is, as commonly believed matters of fact). The background can also be seen as operating in how information is evaluated and interpreted (with what criteria to judge pieces of evidence or how do certain things relate to a given theory). Finally, it might also have an affective and phenomenological dimension in how information is experienced and related to (different kinds of components of certain practices and collaborations, e.g., other-than-human animals, peers, oral histories, etc., might entail different forms of experience and relatedness depending on the background). The multi-level background of methods, criteria, concepts, etc., comprising epistemic practices, and its role in the issues of disagreement, controversy and scientific revolutions has usually been discussed under the rubric of incommensurability (cf. Céspedes 2018;

Hoyningen-Huene & Sankey 2001). Collaborators should identify their shared goals and expectations. While collaboration can be tough, teams can benefit from internal criticism. But what are reasonable expectations in these contexts? And what are the bounds and limits of legitimate internal criticism? As with all challenges, it opens conditions for genuine progress in communication and understanding. Thus, in a relevant sense, the dynamic aspect of common grounds due to constant criticism may be seen both as an obstacle to effective collaboration and as a benefit to it, because of the instability that may be generated. Self-examination and self-criticism have been considered as philosophical and scientific virtues since the pre-Socratic era. One could think that adding more recursivity to it in order to criticize the conditions that enable criticism (and so on) can do us no harm. More simply put, we propose adding more reflexivity about one's own methods and assumptions, a resource that could be both beneficial but at a certain point problematic as well.

In any manner, it could be shown (actually, it is almost trivial) that instability regarding common grounds affects collaboration negatively. And if constant criticism generates instability, it is natural to counterbalance the process with epistemic elements that could help either to reduce the instability or to manage it in a fruitful way. We can characterize the issue as follows:

Problem of collaboration instability: In collaboration, the same flexibility and communicational dynamics that permit finding common grounds can affect the progress of collaboration negatively if there are no adequate, shared dispositions to maintain it.

In order to reduce or to manage instability, we propose to consider different epistemic virtues together with specifying how they translate to more concrete desiderata. They will serve for both assessing collaborations, and reflexively include them in their enactment.

Regarding the assessment of information, as well as of experiences, one should note that there might be a fundamental gap between both. For example, while information may be contrasted, in order to evaluate its correctness, based on its source and on how it is correlated with states of affairs, particular experiences (and even kinds of experiences) are unique and embodied, such that their evaluation is not merely about contrasting them with assumed matters of fact or with “genuine” sources. One can assess transparent statements about matters of fact such as "the land between 37°35' and 39°37' south latitude contains high quantities of sulfide due to volcanic activity" but the same cannot be done with certain testimonies and personal experiences of, say, belonging to a particular territory. This issue is part of a common, more complex problem, which consists in the question of how should the abstract and the concrete interact with each other in the practice of collaboration. The problem can be particularly pressing when considering a discipline usually high in abstractness, such as philosophy, together with practices which are (usually) undertheorized, such as those relating to traditional ecological knowledge (a similar point, concerning the connection of philosophy to concrete practices, was raised at the beginnings of bioethics, cf. Callahan 1973). The pitfalls of not considering this issue appropriately could be seen in a possible diagnosis of the failure of the philosophy of mind in providing analysis of general concepts that can be of use to practicing cognitive scientists (Ludwig 2015). How can we effectively integrate the ways in which we express ideas, models, theories and informational content with our own and with others' concrete experiences and situations? We can call this the problem of the abstraction gap. This problem can be associated with a further dimension that should be taken into account to guarantee the mentioned stability of collaboration, namely the (also classical) issue of connecting the general with the particular. Let us call this the generality gap. So, both information and experience vary with regards to their generality. The extremes are placed at the very abstract,

general information and at the very particular, concrete experiences, as well as at the very particular (i.e., specific) abstract information, opposed to the very general, particular kinds of experiences. Collaboration could start from different regions of this space, and usually may require bridging gaps within those regions. For instance, some scenarios may require connecting two opposing extremes, while others may demand less effort because the parts involved might happen to start from similar experiences or similar abstraction levels (cf. Angle 2006 on the issue of conceptual distance). Both the abstraction and the generality gap give shape to a broader problem that can be characterized as follows:

The gaps-of-collaboration problem: Every collaboration scenario will (constantly) confront lacunas in a space that is defined in terms of abstraction and generality. Collaboration will only be effective and stable as long as it is able to bridge such existing and persistently appearing gaps³.

Despite the presentation of the problem being, to some extent, abstract, there is a concrete set of problems that it also tracks: Ethnobiology and philosophy are collaborating in times of climate and social crises, where connecting things to practice faces high stakes. Connecting the general with the particular is not mainly a philosophical problem, but a lived one. The challenge is being able to make recommendations or to provide normative considerations that are attentive to practical constraints. Even practical areas of philosophy, such as ethics and the philosophy of law, may take forms that are too abstract for certain concrete issues (cf. Brister & Frodeman 2020). On the flipside, ethnobiology, in its practical and theoretical complexity, may fall into conceptual unclarities that could call for special epistemological and methodological tools (cf. Gaoue et al. 2021). Note that this formulation has also the form of the positive orientation that collaboration in general should have. In the light of all this, we can benefit from considerations based on epistemic

virtues, especially, on those that facilitate bridges between the abstract and the concrete and between different backgrounds of knowledge and interest (for example, priorities or single, non-comparative aims). On this basis, and as we will show in what follows, taking the appropriate epistemic attitudes across different facets of collaboration must be central.

2.2 Virtue Epistemology: Managing Instability and Connecting Theory to Practice

Having in mind the importance, mentioned in the last section, of an understanding of collaboration that permits to adequately connect the abstract and the concrete, together with managing instability in the common ground that allows the joint enterprise, we will focus on the idea of epistemic virtue rather than on general conditions of action. While epistemic conditions⁴ in general may be too abstract, and mere descriptions of actions may lack the conceptual clarity we need, epistemic virtues turn us toward the dynamic, agential and engaged normativity of the criteria we are seeking. We should note that, as we introduce the concept of epistemic virtue we want to propose, we will consider aspects that are proper of knowledge acquisition and informational content (cf. Greco 1993). However, as should be clear, virtues are not mainly about what one may acquire or transfer; they are rather understood as dispositions or tendencies to act in certain ways and according to certain interests or goals. Before saying something more about our decision of the epistemic virtues to be considered, we have to characterize the concept of epistemic virtue in general. Again, the fact that we can illustrate them in terms of knowledge acquisition, information, or propositional content does not mean that epistemic virtues are mainly about these aspects. Actually, epistemic virtues cannot be expressed just in terms of typical epistemic attitudes of idealized epistemic subjects (fully rational agents, for instance). By contrast, epistemic virtues can just be attributed to persons or communities, i.e. situated and organic agents or groups. They

are features that tend towards a correct acquisition of knowledge, but they are not the abstract necessary and sufficient normative conditions that formally guarantee correct knowledge acquisition. They rather drive actions for adequate knowledge construction and acquisition, but they are neither mere rules for action nor the particular, concrete actions. Epistemic virtues are agential and normative dispositions (cf. Code 1987; Kvangig 1992)⁵. Thus, what will concern us in this work is what kinds of epistemic virtues can benefit collaborative practices, in particular, collaborative epistemic work between philosophy and ethnobiology.

Having defined in general terms what epistemic virtues are and their nature, we introduce sentimentalism as the account of virtue epistemology that we consider optimal for tackling the issues presented above. Sentimentalism concerns a person's epistemic receptivity toward different perspectives, contexts, or points of view with which she might disagree (cf. Slote 2018). In our discussion, we adopt sentimentalism as the appropriate virtue epistemological account to adopt because it focuses on practitioners, working synergistically with the tacit dimension of collaborations (and because collaborations involve first and foremost agents). While other positions vis-à-vis the needed epistemic virtues, like reliabilism and responsibilism⁶, are more directly concerned with knowledge acquisition through propositional content, sentimentalism is focused on the understanding and the consideration of beliefs, concepts and propositions even when they may not be rendered as true or correct. We may, for example, find ourselves in an interdisciplinary collaboration where part of the job is learning through field visits and hands-on practice different practices of vegetable fiber recollection on a habitat (as it is the case in the FEP courses; see Section 3). In this setting, it is not even clear at first instance what might be the object of epistemic appraisal or how such activities are relevant for understanding features of the environment. Due to this ambiguity, other virtue epistemological accounts might be ill-suited to

provide the normative recommendations needed for our appropriate participation in the activity. The two virtues at the center of sentimentalism are receptivity and decisiveness. Receptivity, is not necessarily about emotions or feelings in a cognitivist sense, as the name might suggest, but about the intellectual disposition to sense and pay attention to different views, kinds of evidence, phenomena, and methods. More than openness, it is the active tendency towards perspectives that could be assessed in an epistemic way. Sentimentalism, and the virtue of receptivity in particular, would invite us to remain attentive to such practices and try to emulate them even if we do not understand how they are conducive to knowledge in the first place. This active stance to learn from others and be open to different approaches is what receptivity focuses on, being particularly appropriate for tackling the problems we are considering. The second important virtue is that of decisiveness. Given the ambiguous and tacit elements of collaboration, mere attention and openness might not be enough, as the need to produce outcomes and epistemic products remains. Apart from receptivity in participating and learning from the experience we briefly described, there must be decisiveness to include what is learned into the productive part of the enterprise, even if issues regarding a common language and possible disagreements might not be fully resolved. In short, decisiveness is the virtue of taking the leap from epistemic appraisal to action. The sentimentalist account will help us considerably to evaluate the collaborative work and exchange between philosophy and ethnobiology, as shown through the examination of the case study to be considered and as a solution to the problems presented. Epistemic virtues that promote openness and pluralism provide the agential and dynamic normative aspects we need to integrate two disciplines that tend to differ in their abstractness and generality, such as these.

2.3 From Sentimentalist Virtue Epistemology to Desiderata for Collaboration

The role of receptivity and decisiveness need, in turn, to be fleshed out more clearly through desiderata that allow people working on collaborations to see how to embody them in particular instances. This is where the role of our proposed three desiderata comes into play. We will now flesh out each desideratum, their connection to the virtues outlined earlier, and their role in collaboration. Given the problem of collaboration instability, we noted the importance of tacit elements at the moment of engagement. This attitudinal and tacit component means that receptivity and a disposition to engage in collaboration cannot be forced by a certain methodology. As to be noted later, even instances of prima facie collaboration between disciplines or of the inclusion of traditional ecological knowledge (TEK) in certain settings can fail to live up to intentions. Given the precarious nature of some attempts at inclusion and engagement, a methodology should foster receptivity and openness to other perspectives. We state the first desideratum then as: (D1) The context of the collaboration should foster receptivity among its practitioners. Fostering receptivity can help to avoid instances of, for example, unilateral imposition of disciplinary criteria for the assessment of different parts of the collaboration (as Brister 2016 showcases through the coinage of the term disciplinary capture); the overriding of indigenous ways of knowing by other methods (noted in Ludwig and El-Hani 2020); and instances of the inclusion of TEK in inappropriate ways (as in the case analyzed by Townsend and Townsend 2021, to be discussed in Subsection 3.1).

The three examples just noted all have a thing in common: They refer to collaborations that are tackling problems which entangle the ecological and social. This points us towards another key fact in the context of this discussion: Collaborations between philosophy and ethnobiology occur against the backdrop of multiple social and ecological crises (Ludwig and El-Hani 2020). Failure to deploy knowledge which can be vital to the tackling of such problems can be seen as indecisiveness, especially because our contexts demand urgent action and interventions, requiring

us to relax certain assumptions of disciplinary rigor and evidence. Such problems have been discussed elsewhere under the rubric of inductive risk and the role of values in science (Douglas 2000). The ecological and social demands facing the collaboration between philosophy and ethnobiology are the target of our second desideratum: Collaborations should produce knowledge targeting problems faced by stakeholders. Just as a failure to take action due to skeptical doubts, as presented by Slote (2018), would be an action lacking in decisiveness (and thus epistemically faulty), failure to produce results targeting the relevant socio-ecological problems would be a failure in that same regard. That is why a methodology for collaboration should have at the forefront the issue of making collaborations count to the practical matters at stake. The second desideratum, then, can be formulated as: (D2) Collaborations should aim to produce knowledge that addresses the problems faced by stakeholders.

So far, both (D1) and (D2) leave undefined the issue of who are the relevant communities and collaborators whose interests need be considered for the production of results. This is tackled by our formulation of the third desideratum: (D3) Relevant stakeholders for each case should be included by attuning to the conditions of the collaboration. Just as there have been failures to consider indigenous communities due to putting into question their authenticity (Burkhart 2019; Saldaña-Portillo 2003), there have been problems of collaborating partners which end up objectifying and utilizing the inclusion of TEK for private ends. A reflexive attitude in deciding who gets a sit at the table in collaborations should be a vital component of any methodology that aims to bridge and bring together philosophical and ethnobiological practices. In this case, it is the interplay of receptivity and decisiveness, to be open to new participants and ways of knowledge and to settle ways of inclusion and exclusion, which is at stake in our third desideratum.

3 Description of FEP Courses: (1) Interdisciplinary Encounters (2) Metaphoric Communication (3) Field Activities of Conservation

The present section describes the threefold structure of Field Environmental Philosophy (FEP) courses given on the Omora ecological reserve at Navarino Island. Our purpose here is to show how a methodology which takes up the three desiderata proposed works in practice. Different dimensions of the process will be singled out in order to show the ways in which FEP fulfills our criteria and thus tackles possible problems. Given the role that FEP has played across time in interdisciplinary collaborations including philosophy and ethnobiology, during several years, we regard it as a methodology that has proved its virtuous role in promoting collaboration. Although the focus here is on the learning experience, we want to emphasize that the methodology has already played a role in producing novel research, as evidenced by various Ph.D. students and researchers who have conducted their work under this framework (see e.g., Ojeda et al. 2018; Pizarro et al 2017; Contador et al. 2018). For the sake of brevity, we are going to point only to the most general features of the program; for a more detailed account of the course and its contents see Malebrán and Rozzi (2018) and Tauro et al (2021).

Overview of the Composition and Goals of the FEP Courses

The courses imparted under the methodology of FEP last for three weeks and mainly have university students as participants. They come mostly from the United States and Chile, although there has also been a presence of Asian and European students. The course is primarily imparted in English. It states to have the following aim:

It exposes students from Chilean and foreign universities to intercultural and interdisciplinary experiences of research, conservation, and biocultural education in one of

the last pristine areas on the planet. Through these field experiences, participants are guided to explore different ways of perceiving, investigating, defining, valuing, and conserving biocultural diversity. It is intended that the FEP methodology deliver concepts and practices that are applicable both during the course at the CHBR [Cape Horn Biosphere Reserve], as well as later in the places of origin of the participants, which include urban environments. Ways of investigating biocultural diversity include perspectives from the arts and philosophy, modern sciences, and traditional ecological knowledge held by Indigenous peoples, such as the Yahgan people, native to the southernmost channels' region. (Malebrán and Rozzi 2018:210. The translation from Spanish is ours)

The course structure is threefold: (1) In the first step, through field visits, the students get exposed to the biophysical and cultural context of the Magallanes region. (2) In the second step, they engage in analogical thinking by creating metaphors, short narratives, and other devices. (3) In the last step, through the know-how gained during the first steps, the group organizes field trips to different zones of the habitat, with conservation, research, and other purposes. Through in situ encounters they consolidate the diverse epistemic and ethical relations to the biocultural environment that the course aims to bring forth (Rozzi et al. 2020a).

3.1 Step 1: Interdisciplinary Inquiry

The first step starts with guided field trips through different places in the environment. This experience involves various aspects, including a concern with slow walking and slow appreciation of landscapes, for achieving a sense of reconnection usually lost in urban environments. Although some physical elements would not be replicable in other environments,

we want to stress the whole lived experience that the course tries to bring, involving not merely intellectual exercises but active practices of attention. Aside from field experiences, participants engage in classroom and lab activities that teach them to become aware of more specific features of the habitat. This is done through instruction in many disciplines practiced in the reserve with conservationist goals. Thereby, students get access to the ecological purpose of the knowledge being considered. For the ethical and philosophical aspects, students practice slow readings of philosophical texts, mainly from the environmental philosophy tradition. They are prompted through the readings and through their own learning experience to develop a reflexive awareness of the learning process and its context. Finally, and most importantly for our purposes, is the access to the practices and knowledge of the Yahgan people (*Yamana*, in the native language). They get exposed to knowledge such as the different taxa of the Yahgan and their relation to the habitat (Ojeda et al. 2018) and get hands-on experiences with artisanal practices. For example, Yahgan artisan Julia González served as a formal instructor of basket confection for the students, an activity preceded by the recollection of vegetal fibers in the habitat and their subsequent preparation. Given the multiplicity of perspectives considered during the course, an engagement with a plurality of epistemic practices and a pluralist attitude in considering such plurality positively (Kellert et al. 2006) is part of the FEP methodology. This provides not just a set of concepts but a whole ecological and cultural context for the knowledge acquired. The course has also enjoyed the participation of the Mapuche poet Lorenzo Aillapán, who through teaching traditional instruments, songs, and other cultural elements, conveys the biocultural knowledge contained within their cultural tradition.

Receptivity Through Practices of Attention

As we noted at the beginning of the work, a collaboration between epistemic practices, particularly if we consider philosophy and practices related to TEK, presents complex issues concerning the recursivity and instability of some aspects. Even the conditions for criticism could be questioned, making collaboration particularly problematic. The sensibility to be open to other practices cannot be captured merely in conceptual terms, as those concepts and criteria could be problematized. This pointed us towards the need for an openness and forms of receptivity that rest on tacit ways of engagement and require active attitudes from the practitioners. Having such openness is, at the last instance, a matter left up to practitioners, but there are modes of fostering such receptivity. This is exemplified by the inclusion of TEK in the Inter-American Court of human rights. This case, although an instance of the attempt to include TEK in institutional procedures, fails in doing so adequately as it objectifies the discourse produced by indigenous communities, including it in a mechanical way which is not appropriately receptive (Townsend and Townsend 2021). A lack of receptivity could be present even in procedures that aim to be inclusive. That is why the methodology emphasizes practices of attention, since they imply an active work and a sensibility to listen, perceive, and have in situ encounters with the habitat and other participants in a way that opens dialogue and transformative experiences. The goal is not to regain a point of view lacking presuppositions or reach a tabula rasa from where the participants start to engage. This stress on attention and perceptions of the environment connects with accounts that defend the importance of thinking about cognition and perception in ethnobiological practice (Ludwig 2018). The material practices of the course aim to make that a livable reality: Regaining attention to the different features of the environment and practices but also gaining awareness of the cultural background of their own perception. This type of transformative engagement could be

seen under the lenses of fostering receptivity in practitioners, embodying the first desideratum considered.

Decisiveness and Ecological Context

As presented in the description of the courses, the FEP methodology acquaints participants with the ecological purpose of such knowledge. From the long-term biodiversity monitoring in the reserve, to the even more long-term sustainability of the Yahgan inhabitation of the zone, the methodology aims to make the participants aware of the different timeframes considered. The three-phased structure of the course has also developed due to the time constraints the courses face. The activities in the course do not just consider the long-term ecological consequences of the collaboration, but also include how even investigating the local biota must be done with care to alter the conditions of the habitat as little as possible. This awareness marries both the immediate time constraints and the activities' long-term purpose. We think that this multi-layered consideration of biological and other time frames is important in the face of the multiple challenges that such an inquiry involves. As shown previously, such sensibility is entangled precisely with the ecological purposes of the reserve and the communities involved, such that it is from the start developed to make decisions in a timely manner. This consideration of time, then, is also entangled with the practical purposes of knowledge. Given this, we think the course complies with the second desideratum: (D2) Collaboration should be tailored to produce knowledge targeting the problems faced by stakeholders. Note that this desideratum introduces both issues of epistemic nature (the appropriateness of something can be influenced by its being evidence-based, being reliable, etc.) and of material dimensions, e.g. the time it might take to produce epistemic results, given the practical goals at hand.

3.2 Step 2: Poetic and Metaphoric Communication

After the initial stage, students have the task of analogically and poetically relating the different things learned and connecting them to the concerned habitat. Metaphors permit a creative bridging of the different pieces of knowledge the students have become acquainted with. Furthermore, they provide an opportunity for novelty and particularity during the teachings, as metaphors are not ready-made bits of knowledge but require active thinking by the practitioners. The rich context of metaphors enables them to grasp how intuitive understanding requires a whole set of previous acquaintances and material embeddings within the environment. As activities tailored to the ecological conservation of the CHBR through a vivid awareness of the value of species and environments, the courses also bring into sharp relief the entanglement of values and facts, and their fuzzy boundaries (Malebrán and Rozzi 2018:211). This stage can feedback on the knowledge received during the first to provide a new understanding of the metaphoric character of many received pieces of knowledge. Examples are the metaphor of natural selection by Darwin and the onomatopoeic aspects of indigenous naming of birds, like the name of the *Trochilidae* in Mapudungun, *Pinda*, which evokes the sound of its flapping wings. This echoes not just with the pluralism presented before, but also with a different kind of sensibility: An awareness of the different vehicles of biocultural knowledge, which doesn't limit itself to propositional form, concepts, or theories, but is also contained and dispersed through language and other cultural practices. For example, Ojeda and colleagues (2018) identify former migration and foraging patterns of the Yahgan people as containing inbuilt knowledge of the variability in abundance of local mollusks. After this stage, the participants organize field activities in groups to again access the different habitats, this time with their new understanding of their relation to it.

Receptivity through narrative and metaphor

The role of metaphor in interdisciplinary collaboration is an inbuilt feature of the methodology. Scholars involved in the development of FEP noted the place metaphors could have in dealing with the challenges of interdisciplinary collaboration (Oelschlaeger and Rozzi 1998). This role for metaphors is also recognized, for instance, by Stephen Kellert (2008) in interdisciplinary collaboration in the context of the sciences of complexity. Metaphors are a way of integrating and promoting an intuitive grip on the different pieces of knowledge grappled with. This shifts attention away from considering reified forms of knowledge to other tacit elements of epistemic practices. Metaphors also permit a bridging of practices, something crucial in light of *the gaps-of- collaboration problem* we identified earlier. In the words of Oelschlaeger and Rozzi (1998:58): “Metaphors can become[...] key elements to unite ostensibly separate disciplinary semantic spaces such as—for example— evolutionary ecology, economics and ethics. This explains the extent of use of metaphors in the literature related to the discussion of interdisciplinarity”. They are, then, part and parcel of the dynamic efforts to collaborate across different epistemic practices. Apart from the use of metaphor, as we noted before, the Yahgan people’s knowledge of the environment is not confined to concepts but is contained in tacit elements such as their foraging patterns and current fishing practices. Other ethnobiological accounts stress, for example, ecological knowledge contained within folk songs or the transfer of knowledge about sustainable patterns of recollection contained in social taboos (Xu and Wu 2019:282, 285). The point is that through both these elements, the use of metaphor and the appreciation of the inbuilt knowledge of indigenous practices, collaborators become aware of the work needed for epistemic practices, putting the stress on knowing and not on bits of knowledge, avoiding a reification of the practices considered, and avoiding a mechanization of the process. This active component could be seen as exemplifying the engaged nature of receptivity.

Step 3: Back to the Field

In the third step, the participants return to guided field trips. Through the learning experience of the first two steps, it is expected that they create an empathic relation to the habitants of the environment, to incorporate the significance of the different epistemic practices and their relation to biocultural conservation into their own living experience. The participants engage in activities of conservation and ecological care of the environment. That means that in addition to getting acquainted in previous phases with the conservationist purpose of the different lessons, they then deploy their own knowledge with ecological purpose. Also, based on the acts of metaphoric imagination developed during the second step, they craft signages then placed into the habitat. Again, pointing to one of the main objectives of the methodology, this gives the practitioners a sensibility to the cultural influence present in perception. Both this ecological deployment of the knowledge considered in the courses and the awareness of the cultural background of perception feed back into the promotion of decisiveness and receptivity, respectively, as shown in previous sections.

3.4 – Who Collaborates?: On the Role of Co-inhabitants

The critical issue which arises in the third desideratum (“Relevant communities and collaborators for each case should be included by attuning to the conditions of the collaboration”) is the following: Who gets to be part of collaborations? And how? Apart from that, there is also the element of whose interests would get considered during the process. The possibility of exclusion and inclusion is tackled by the FEP methodology, as it showcases an interplay between

decisiveness (to include and exclude) and receptivity (to possible members of the collaboration and the contexts involved) which also support felicitous collaboration. This consideration stems both from the ethical framework we will explain below together with another crafted dimension of the course, their human diversity. The courses have included participants from a variety of geographical, cultural, ethnic, and disciplinary backgrounds, making exposure to and engagement with diversity a staple feature of the course⁷.

The deeper rationale and the component that explains the enactment of (D3) by collaborations under the FEP methodology stems from the 3H biocultural ethic framework (Rozzi et al. 2020b). The three Hs stand for co-inhabitants, habitats, and habits. Recovering the traditional sense of ethics as related to the place of abiding, the framework understands inhabitants as engaged in ecological and living relations, deserving recognition and nurturance from the co-inhabitants related (echoing accounts of the role of ontology and relationality in ethnobiology, cf. Ludwig & Weiskopf [2019]). In this framework, collaborators are the co-inhabitants of the same habitat, and the collaboration involves a co-sharing, disclosure, creation, and transformation of habits. This concerns not only the co-inhabitants most closely related to the physical location of the courses, such as the Yahgan people, but also more expansive notions of co-inhabitant, as there are global ecological challenges to which these collaborations can make contributions (Ludwig & El-Hani 2020:16). These global challenges point to the fact that we are still talking about living relations of co-inhabitants even if we consider a planetary scale. Also, the knowledge acquired and produced does not aim to tackle just the local ecological challenges but also to provide participants with tools that they can use in their places of origin (see *Overview* in section 3). New spaces of cohabitation are also created in the collaboration process, as we should not simply accept the instances of collaboration as a given, but promote reflectivity as part of the process. The

contestation, creation, and transformation of spaces in society for real cohabitation is also part of this view. To round up, we also want to notice that our account and the interaction of Field Environmental Philosophy with the new emerging philosophy of ethnobiology (together with collaborations between philosophy and ethnobiology) do not aim to leave FEP intact, but to feed back in the organization of the courses such that there is a never-ending dialectic of criticism, receptivity, and decisiveness, the interplay of which is what defines collaboration.

Conclusion

The many issues facing collaborations between ethnobiology and philosophy call for particular attention to identify the main problems and strategies for addressing them. We have advanced two related answers to those questions, positing that the main problems could be understood as that of the instability of the collaboration, and that of maintaining appropriate connections between the abstract-general with the concrete-practical. These problems and the challenge of applying normative criteria to such dynamic encounters call for attention not (only) to neatly defined beliefs or sets of them (as for example stressed in Ludwig & El-Hani 2020:5), but to the agential dispositions and dynamic attitudes and policies embodied by the actors enacting the collaboration. This type of focus is promoted by sentimentalism, and its two respective virtues: receptivity and decisiveness. We translated those virtues into specific desiderata for collaborations across these practices.

Through showcasing successful collaborations in the methodology of Field Environmental Philosophy, we delineate how its different steps and dimensions embody our desiderata. This case study allowed us to formulate various insights: First, the desiderata allow us to comprehend more

transparently how the different dimensions of the methodology work towards felicitous collaboration. Second, it shows how promoting reflexivity is a multifaceted activity involving embodied practices of attention as well as more intellectual and theoretical ones (the pluralism included in FEP). Third, it showed how decisiveness can be embodied through conservationist practices tailored to the needs of the territory. Finally, it also showed how collaboration can successfully encompass those close to the territory and those who are afar because they participate in the global ecological dynamics to which these collaborations can contribute.

The multiple components and dimensions of FEP also helped to exemplify why the terrain of collaborations between ethnobiology and philosophy needs agent-centered, dynamic ways of assessing them. The multiplicity of backgrounds that come to bear on them, the organizational challenges such instances present, the imperative to address environmental challenges; all of these difficulties and more, especially when there is no set framework for such collaborations, are particularly demanding of and dependent on the people engaged in the activity as such.

The work shows the importance of thinking collaboration under the lenses of a sentimental virtue epistemology and the three desiderata that emerged from such considerations: (D1) The context of the collaboration should encourage receptivity among practitioners; (D2) collaborations should aim to produce knowledge that addresses the problems faced by stakeholders; and (D3) relevant communities and collaborators for each case should be included by attuning to the conditions of the collaboration. The defense of this account was done first by introducing common challenges to collaborations having to do with the importance of the instability and disagreement caused by mutual criticism, and the need to bridge gaps between theory and general normative notions with concrete results. We introduce the case of FEP and show that the

methodology of FEP follows the three desiderata. This contributes to creating a felicitous case of collaboration between philosophy and ethnobiology.

This work aimed to both provide criteria that might bear upon the practice of collaboration together with studying collaboration itself. This double aim is present because the dynamic, lived, and iterative dimensions of collaboration demand perspectives that can take both issues of general normative character but also relate to how these general notions can come to bear on actual encounters between epistemic practices, particularly concerning philosophy and ethnobiology.

Future avenues for inquiry should study further how certain virtues, for example receptivity and decisiveness, are actually embodied in the practice of collaboration. An example of that would be Espinosa and Trujillo (2023) study of how the notion of excellence gets embodied in the lived practices of a research center. Apart from studying in situ how certain notions get embodied in practice our account could be supplemented by analyzing in more detail the multiple backgrounds composing and supporting epistemic practices, for example, using the tools of contextualism in contemporary analytic epistemology.

Notes

¹ We use the term “epistemic practice” instead of “theory” or “discipline” here in order to imply that we are not working under a framework that characterizes knowledge just as states of a cognitive system or a set of cognitive systems. In other words, knowledge states are always supported by and affecting actions, practices, habits and actions’ aims. An epistemic practice is any practice that is related to knowledge states in this way. A second issue is that “discipline” usually implies a certain kind of institutional backup and context, which not all epistemic practices, for example from marginalized communities, enjoy. A working definition close to ours is that given by Kelly & Licona

(2017:139): “Epistemic practices are the socially organized and interactionally accomplished ways that members of a group propose, communicate, assess, and legitimize knowledge claims”.

² While methods can be understood as explicitly formulable, rational ways of acting, dispositions can be conceived as tendencies to act in a certain way given particular circumstances, even if neither the circumstances nor the type of action can always be formulated explicitly. If one takes a glimpse at the literature on virtue epistemology it is immediately apparent that the concept is usually undefined and unproblematized. For a more throughout exposition of the concept in the context of that discussion see Henderson & Horgan (2009), although an ordinary comprehension of the term suffices. For a historical review of the philosophical study of dispositions and for an analysis of dispositional language, we recommend the work of Alexander Bird (2012).

³ With this coinage we do not pretend to be formulating an unheard-of problem. Many key issues in philosophy relate to the difficulties arising from connecting the general and particular, theory and practice, etc. Our articulation of this problem aims to make salient how that family of difficulties is relevant in the context of collaborations.

⁴ In general, epistemic conditions are understood as (usually necessary and sufficient) proposed conditions by which components of epistemic practices (such as propositions, models, etc.) should be evaluated. A paradigmatic example would be definitions of knowledge, such as “knowledge is reliably acquired true belief”. Note we do not take a stance against or in favor of any given particular instance of an epistemic condition.

⁵ For a historical and comprehensive survey of virtue epistemology, we suggest the article written by Jonathan Kvanvig (2011) on the topic that was published in the *The Routledge Companion to Epistemology*.

⁶ As a short explanation of these other competing virtues and of the issue of virtue epistemology: suppose that we want to gain knowledge about *p*, where *p* is a proposition describing a possible matter of fact. Based on what kind of dispositions should we pursue that aim? We might put our efforts in guaranteeing that our methods or capacities of justification and of finding evidence for *p* are reliable. Or we might want to rather focus on personal and interpersonal attitudes such as open-mindedness, impartiality, decisiveness, and rigor, among others. The first way of seeking knowledge is based on reliability as a main epistemic virtue, while the latter is based on epistemic virtues regarding personal responsibility. Similarly, if we want to assess someone’s presumed knowledge about *p*, we might focus on their methods and evidence grounding *p* or we might focus on their personal attitudes while investigating about *p*.

Although these perspectives are not mutually exclusive, they represent different views on what are fundamental epistemic virtues: reliabilism and responsibilism, respectively.

⁷ The virtuous role of diversity in epistemology has been noted before, notably by Longino's critical contextual empiricist framework (2002).

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