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ORIGINAL PAPER

# The foucauldian approach to conservation: pitfalls and genuine promises

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## Abstract

Conservation biology is a branch of ecology devoted to conserving biodiversity. Because this discipline is based on the assumption that knowledge should guide actions, it endows experts with a power that should be questioned. The work of the French philosopher Michel Foucault (1926–1984) can be seen as a relevant conceptual resource to think these aspects of conservation biology through. I critically analyse the relevance of the Foucauldian approach to conservation. I argue that Foucauldian arguments are deeply ambiguous, and therefore useless for conservation purposes, unless they are supplemented with unsaid assumptions that are, depending on the case at hand, untenable, or at least at odds with basic assumptions underlying conservation biology. In any case, the prospects of using the Foucauldian approach for conservation purposes are deeply undermined. However, the Foucauldian reasoning contains some ideas that can be important and useful for conservation purposes, if they are duly clarified.

**Keywords** Conservation biology · Foucault · Power · Knowledge · Governmentality

## 1 Introduction

Conservation biology is an action-oriented and normatively-motivated branch of ecology (Soulé, 1985). It has arguably played a historical role in the setting up of important conservation actions, such as the establishment of national parks (Runte, 2010). However, a growing literature now questions the ability of conservation biologists to design successful conservation strategies (Jones, 2019) (Büscher & Fletcher,

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2019) liable to halt the current biodiversity crisis (Djoghlaf & Dodds, 2011). These weaknesses are sometimes explained by conservationists' inability to adequately take into account the complexity of the psychological, social, and cultural processes underlying both anthropogenic impacts on biodiversity and initiatives deployed to protect it (Mascia et al., 2003) (Kopnina & Washington, 2020), and associated power imbalances. Beyond ignoring power, conservation biologists can even be caught in mechanisms through which they (mostly unwittingly) strengthen existing power relations, with detrimental implications for biodiversity (Devictor & Meinard, 2019). For example, this is the case, at least according to some authors, of biodiversity offsetting mechanisms (Gibbons & Lindenmayer, 2007). Because it is articulated mainly in the terms of Western science, but fuels many projects in developing countries, conservation can also be seen as form of green imperialism (Grove, 1995). These various readings of the predicament of conservation biology highlight the need for conservation biologists to think through the relation between their knowledge and power. Michel Foucault (1926–1984), a French philosopher whose thought has had a deep influence on contemporary thinking on both sides of the Atlantic (Cusset, 2008), is increasingly considered to be a major source in helping conservation biologists in this vital task (Carpenter, 2020). A growing literature accordingly refers to Foucault in analyses of environmental projects (Fairhead & Leach, 1996) (Agrawal, 2005) (Li, 2007) (Lougheed et al., 2016) and of conservation knowledge (Carolan & Bell, 2003) (Biermann & Mansfield, 2014) (Srinivasan, 2017) (Youatt, 2008) (Kiik, 2019).

The present article is a critical analysis of the relevance and usefulness of this Foucauldian approach to conservation. The phrase "Foucauldian approach" refers here to Foucault's own writings (which predate the emergence of conservation biology and are not specifically concerned with environmental issues), and to the work of researchers explicitly referring to him in analyses of conservation. Three key themes running through the works that Foucault developed in the 1970's will provide the structure of this paper: "power/knowledge", "the triangle" and "subject formation" (I will leave aside earlier works devoted to the so-called "archaeology of knowledge" (Foucault, 1972) and later works on art and ethics (Foucault, 1994), because they are barely used in contemporary applications to conservation biology). I will have more to say in the section on power/knowledge, which constitutes the backbone of Foucault's philosophy. The next two sections will be of decreasing length, because the three themes are tightly connected.

In my critic, I will argue that Foucault's texts and contemporary applications to conservation are framed in a confusing rhetoric, which I will criticize by contrasting "the said" and "the unsaid". I use the former term to refer to what Foucault and Foucauldian authors literally write, and the latter term to refer to implicit assumptions that they rarely explicitly state, but subtly call for. I will argue that, if limited to the said, Foucauldian texts do not convey any clear message. By contrast, supplementing the said with the unsaid turns these texts into bold, thought-provoking claims. The Foucauldian corpus accordingly owes much of its traction to the contribution of the unsaid. Unfortunately, the unsaid assumptions that the reader is subtly encouraged to embark in his reading are untenable, or at odds with basic assumptions underlying conservation biology.

Therefore, if limited to the said, Foucauldian claims are ambiguous, and if supplemented with the unsaid, they are untenable. Either way, the Foucauldian approach as it stands proves irrelevant to conservation purposes. However, I will also argue that the Foucauldian reasoning contains some ideas that can be important and useful for conservation purposes, if they are duly clarified.

I intend this reasoning to bear concrete lessons for conservationists to improve their theories and practices, thanks to a better understanding of the power relations at stake in their interventions. To illustrate these concrete lessons, I will refer to a case study –conservation actions designed in the Rochières Area, South-east France, to preserve populations of *Ophioglossum vulgatum* L., 1753, a legally protected plant species (Lelièvre et al., 2021). As a botanical expert, I participated in designing these conservation actions, and could follow the work of other consultants in this project. I will use this example to show how a clarified version of the Foucauldian approach can be useful, whereas the original version is confusing.

## 2 Power/knowledge

Foucault's contemporary influence owes much to his works on the relations between power and scientific knowledge, epitomized by the concatenated word "power/knowledge" (Foucault & Gordon, 1980) (Honneth, 1985) (Habermas, 1988) (Dreyfus et al., 1983) (Falzon et al., 2013).

This issue emerged only in the 1970's in Foucault's thought (although he touched on the subject in his earlier works (in particular in Foucault 1976) in an elusive form). This emergence is marked by *The History of Sexuality, an introduction* (Foucault, 1978), but the main ideas were elaborated in a series of lectures from 1970 to the early 1980's, later published as books (Foucault, 2008) (Foucault, 2003b) (Foucault, 2007) (Foucault, 2019) (Foucault, 2006) (Foucault, 2003a) (Foucault, 2015) (Foucault, 2005) (Foucault, 2011). The understanding of these Foucauldian works by English-speaking readers is also, to a great extent, based on *Power/Knowledge* (Foucault & Gordon, 1980), a collection of articles by and interviews of Foucault (Carpenter, 2020). In this first section, I will show that Foucault's and Foucauldian authors' usage of the terms "power", "knowledge" and "truth" in this line of thought is ambiguous.

To demonstrate this point, I will simply point out discrepancies between various formulations, without pretending to trace back the evolutions of Foucault's vision of power. Such an historical task, which is difficult and tentative due to time-lags between writing periods and publications themselves, and due to the reworkings and editings of texts, falls beyond the scope of the present paper.

In *The History of Sexuality*, discourses are presented as tools used by actors engaged in power trials. A prominent aspect of these early formulations is a highly deceptive use of terms like "intentional", "objectives", "strategies," or "tactics." The usage of these terms stems from Foucault's emphasis on the idea that power and discourse share the feature of being both intentional (they follow objectives), and non-subjective, or "authorless" (Carpenter, 2020, 13). The idea that power and discourses are authorless is used to overcome the simplistic view that discourses are entirely produced and mastered by powerful actors to foster their own interests. Foucault rather understands power as a complex multiplicity, exercised through both discourses and practices, unstable and ever-changing, and pervasive rather than confined to the top of the existing hierarchy. This vision of power however creates a problem: if power is multifarious and authorless, how can one delineate meaningful units of power ? Foucault's proposed solution is to stick to a terminology that is usually associated with a reference to a subject or an author ("intentional", "objectives", "strategies," or "tactics"), while insisting that, when he uses these terms, they do not presuppose such a reference.

This idiosyncratic use of ordinary terminology is bound to create confusions. A much clearer way to express the same idea would be to say that, by analysing power, one can see emerging a logic which was neither created nor mastered *ex ante* by anyone. This is particularly well illustrated by Ferguson(1990), who shows how bureaucratic state power ended up being bolstered by development projects in Lesotho, even though this bureaucratic state had not had any influence on the design of these projects.

Associated with this first (deceptively labelled, but genuine) aspect of the complexity of power, another widely praised aspect of Foucault's approach to power is the idea that, although there are links between power and knowledge, these links should not be oversimplified by claiming that knowledge is always the exclusive instrument of powerful actors and only them. Actors with political power can make use of knowledge and discourses seen as "tactical elements", but those interested in resisting the powerful ones can also use them. Discourse can reinforce power, but it can also undermine it. According to some authors, this "subtle" understanding of how knowledge can serve power, but can also undermine it, is an important strength of Foucault's approach, as compared e.g. with arguably more simplistic Marxist approaches according to which everything is determined by dominant economic forces (Carpenter, 2020).

I argue that this idea undermines the usefulness of Foucault's analyses, at least for conservation biologists. To understand why, let us come back to the reasons why an analysis of relations between power and knowledge can be important and useful for conservation biologists. According to Carpenter (2020), this is because "conservation thought and practice is power-laden", and Foucault's thought provides "a tool-box of ideas about power (useful to) improve the effectiveness of conservation" (p. 1). Carpenter (2020) goes on specifying that the power in question lies primarily in "mistaken assumptions we (conservation biologists) hold about people… and assumptions about our own superior knowledge". Hence the usefulness of Foucauldian analyses would stem from the fact that they can help show that, through false assumptions, conservation biologists and practitioners exert a form of power over people. In this picture, conservation biologists and practitioners are presented as dominant actors, exerting a form of power, based on their knowledge, over dominated people. Tracking and denouncing their own power as dominant actors is an important pursuit for conservation biologists (even if this triggers awareness about them being dominant and having to relinquish their dominance), in line with Foucault' own vision of the role of the intellectual as an activist (Foucault & Gordon, 1980). However, the role assigned to knowledge in this emancipatory endeavour is at odds with the allegedly subtle understanding of relations between power and knowledge mentioned above. In this vision of the emancipatory project, identifying who uses knowledge is seen as the key to track who exerts power. However, if knowledge can be used by dominated actors to resist dominant actors, then tracking who uses knowledge is no longer enough to identify who exerts power.

If knowledge is considered employable by both dominant and dominated actors, an emancipatory usage of the Foucauldian approach requires a logic distinguishing the kinds of discourses that can feed dominance from those that can feed resistance. Carpenter's (2020) aforementioned citation provides such a logic: in her argument, dominance is exerted through *false* or *biased* assumptions. A major application of the Foucauldian approach to conservation in Guinea (Fairhead & Leach, 1996), goes in that direction. Fairhead & Leach (1996) show that, because a colonialist-inspired vision of local people was particularly efficient in moulding local authorities' understanding of ecological, social and historical issues, the latter misinterpreted forest islands in the Guinean savanna as relics of forests destroyed by local people, while in fact the forests were created by local practices in a landscape that would otherwise have been entirely occupied by savannas. In this analysis, the entities that are powerful are wrong discourses—discourses that have been accepted as true by some people at a given period of time, but that eventually proved to be false. This story hence illustrates how a false discourse can become powerful enough to endure. The lesson is not that conservation biologists exerted a form of power through their knowledge. It is rather that, had they listened to local knowledge, they would have both improved their knowledge and strengthened the efficiency of their conservation actions. By the same token, they would have been more respectful towards indigenous people.

The promising approach illustrated by Fairhead & Leach (1996) is, however, not at all the path that Foucault has followed in his works. In all his formulations cited so far, Foucault maintains the commonsensical distinction between power and knowledge, but he ambiguously uses "discourses" and "knowledge" interchangeably. But Foucault will subsequently take increasing distances with the ordinary understanding of "power", "knowledge", "truth" and associated idioms.

In subsequent writings, truth will become "the ensemble of rules according to which the true and the false are separated and specific effects of power attached to the true" (Foucault 1980, 131). This formulation epitomizes a reductionist (and relativist) view that consists in equating truth with what is considered to be the truth at a given time point (this view is explicitly endorsed in (Foucault, 1993)). Foucault (2011) refers to Nietzsche and to the philology of the Ancient Greek term "Alètheia" (as famously explored by Detienne (1996)) to substantiate the idea that how true and false are separated is not as immutable as a naive understanding of the concept of truth might assume. However, this undeniable historicity of practices coupled with the idea of truth (and its forebears) does not make it any less reductionist to claim that truth is reducible to what is accepted to be true at a given moment (Williams, 2002) (Bouveresse, 2016). Foucault often talks about "veridiction", referring to the practices used to separate truths from falsehoods in various contexts, rather than directly about "truth." This terminological precaution might suggest that he was well aware of the difference between truth itself and various associated practices. However, because he never clarified what this distinction is supposed to imply in his framework, the terminological precaution appears to be yet another rhetorical artefact to juggle with the said and the unsaid. The said is about how power moulds and is supported by “veridiction”, but because “veridiction” is the practice that states what is true, and because it is trivial to claim that practices pretending to say what is true are sometimes moulded by and supportive of power, the reader cannot but supplement the said by the obvious unsaid assumption: what Foucault says about “veridiction” also holds for truth.

This tight link between power and truth characterizing Foucault’s late formulations is captured by the phrase “regime of truth”, referring to the alleged fact that “’[t]ruth’ is linked in a circular relation with systems of power which produce and sustain it, and to effects of power which it induces and which extends it” (1980, 133). Foucault’s phrasing is, characteristically, profoundly ambiguous here. The word “truth” is used within quotation marks, which might suggest that Foucault is not talking about truth, but about what some people deceptively call “truth” for manipulative purposes. This seems to suggest that Foucault his not reductionist (in the sense given to the term in the former paragraph) after all—but on other occasions he openly is. Besides, he does not specify the nature of the “circular relation” he talks about. Should we understand that *all* the truths are produced and sustained by systems of power (a reductionist claim), or that it can happen (not a reductionist claim)? Should we understand that power is instrumental in helping unveil an independent truth (not a reductionist claim), or that the so-called truth is a pure artefact invented by systems of power (a reductionist claim)?

Whereas Fairhead & Leach (1996) carefully distinguished between knowledge and truth, on one hand, and, false discourses based on colonialist prejudice (confusingly believed to be true at a given period of time), on the other hand, we therefore see that Foucault’s thought rather tends towards simply equating knowledge, power and truth, collectively referred to as “power/knowledge”. Most of Foucault’s formulations carefully eschew explicitly endorsing this equation. However, numerous formulations such as the ones cited above clearly hint in that direction, and incite the reader to complement the said by this unsaid that turns Foucault’s claims into bold criticism of knowledge in general.

However bold and thought provoking, the reasoning equating power, knowledge and truth is evidently self-contradictory. Indeed, if all forms of knowledge and truth are nothing but power, then the Foucauldian insights are nothing but power. But in that case, why should we believe their claim that all forms of knowledge and truth are nothing but power? In addition to being self-contradictory, this reasoning is incompatible with the emancipatory project sustaining the alleged relevance of the Foucauldian approach for conservation. Indeed, if all forms of knowledge and truth are nothing but power, then using our knowledge of how knowledge itself is used by power is nothing but a form of power, which should be rejected rather than employed by the emancipatory project.

In the radical interpretation that takes the power/knowledge concatenation seriously, the Foucauldian approach is therefore untenable and irrelevant to conservation. However, if we remove ambiguities in Foucault’s claims, we can identify a simple, yet important idea. Complex mechanisms come into play to establish, at any given moment within its specific context, which discourses are considered to be true.

These complex mechanisms are not mastered by any stable, well-identified centre of power. They involve economic, administrative, and political logics. Once these mechanisms have labelled a given discourse as “true”, this gives it a vantage point. The discourse presented as true can then be used by various actors or institutions, either to reinforce their dominance or to resist being dominated. Beyond this instrumental use, the diffusion and usage of presumptively true discourses can have unintended “power effects”, meaning that some actors can benefit from it while other are penalized, without anyone orchestrating these effects. And all these mechanisms and events involved in the emergence and usage of allegedly true discourses can be rather invisible to the very people who are involved in their proceedings. Hence, the actual implication is that, when we are involved in the functioning of these mechanisms, as conservation biologists and practitioners typically are, we should pay attention to these mechanisms and events, and to their connection with and implications for powerful actors and institutions (which can include scientists and scientific institutions).

Such a modest version of the Foucauldian approach is illustrated by Fairhead & Leach (1996)’s study, aimed at analysing how discourses (rather than knowledge or truth) can be used by actors (possibly unwittingly) wielding a form of power. However, in this modest version, beyond the clear distinction between knowledge, truth and discourses, there is the need to start from a clarification of the forms of power that emancipatory projects can denounce. The modest, yet rigorous and useful, version of the Foucauldian approach is therefore unavoidably based on a normative vision of what is legitimate and what is not, or what is right or wrong, or what is good or bad. The precise nature of the normative basis that is relevant for that purpose (i.e., whether this normative basis is a matter of legitimacy (Meinard, 2017) or a matter of justice or ethics (Baron et al., 1997)) falls beyond the scope of this article. In the remainder of this text, I will simply enlist the adjectives “legitimate”, “right” and “good”, or talk about a “normative basis”. In Fairhead & Leach’s example, colonialist prejudice misled conservation biologists who denigrated local people based on this prejudice. The critique is therefore based on the premise that colonialist prejudice is based on illegitimate, wrong or bad power imbalances that it reinforces in turn. By contrast, Foucault never endorsed nor developed any explicit normative theory in his works on power/knowledge (although, as Fairhead & Leach’s example shows, Foucault’s framework is not incompatible with a clarification of a normative basis).

Based on the reasoning spelled out so far, one can distinguish three versions of the Foucauldian approach. The original version, which I propose to call “formal”, is limited to the said, and mainly replaces references to “knowledge” by references to “power/knowledge”. A “provocative” version supplements this said with the unsaid it implicitly calls for, by denouncing knowledge as an oppressive power. Lastly, the “modest” version I champion strives to identify how some actors can foster some power relation, possibly unwittingly, thanks to some pieces of knowledge.

Let us examine how these three versions can be applied to our Rochières case study.

The formal approach would claim that the experts who were involved in drawing up the list of legally protected species in South-east France (back in the 1990s) wielded “power/knowledge” about species distributions and abundances. The formal approach would also claim that, during field sessions to map and quantify populations of *Ophioglossum vulgatum* in the site, what I was really doing was gathering “power/knowledge.” Still according to this narrative, by handing over the data to the manager of the site and by using these data to design an action plan for the future management of the site, I transferred “power/knowledge” to the manager. Because these claims are purportedly not anchored in any normative basis, they do not involve any judgment about whether these uses of power/knowledge are oppressive or emancipatory, just or unjust, good or bad. They should not be understood as conveying any lesson. They are mere reformulations, using a weird vocabulary, of descriptions that would ordinarily be articulated in terms of “knowledge” or “science”.

According to the “provocative” version, when participating in elaborating the legislation protecting *Ophioglossum vulgatum*, the experts and scientists involved were in fact exerting an oppressive power. Similarly, when exploring the study site, counting individuals, assessing the viability of sub-populations and registering their location, what I was really doing was nurturing my dominance over some people (presumably, local stakeholders). Lastly, when implementing management recommendations allegedly to preserve these populations, in fact the manager will exert an illegitimate form of power over the same people. This version of the Foucauldian approach is certainly thought provoking, but it is an unsupported caricature that can be detrimental to conservation by discrediting all preservation efforts.

Lastly, the modest version suggests that the values underlying the work of experts involved in drawing up the legislation should be critically analysed. As it happens, these values were not openly discussed, and are not mentioned in legal texts, which calls for open discussions of the relevance of the criteria used and of the legislation based on them. This approach also suggests that, when designing conservation actions, botanical expertise should not be the only knowledge involved, and botanical experts should encourage local stakeholders to share their local knowledge and collectively discuss the reliability and relevance of various pieces of knowledge. Lastly, this approach suggests that, as a preliminary to implementing action plans, the legitimacy of managers should be collectively constructed. Such ideas are already taken into account to some extent in many conservation action plans (in the case of the Rochières, they were partly addressed through dedicated participatory processes), and the Foucauldian framework is not the only one to champion them, but the modest version of the Foucauldian approach still usefully stresses their importance.

## 3 The triangle: sovereignty, discipline and governmentality

Foucault distinguished three types of government: sovereignty, discipline and governmentality (Foucault et al., 2007), and traced back their historical emergence: sovereignty allegedly is the mode of government characterizing the medieval period. Discipline is said to have dominated from the mid-sixteenth century to the late eighteen century. Governmentality then allegedly emerged. However, these three forms are not mutually exclusive. Carpenter (2020) talks about “the triangle” to refer to contemporary settings in which sovereignty, discipline and governmentality coexist (analysing whether this un-historic reading is faithful to Foucault falls beyond our scope).

The three forms of government are variously defined in Foucault's texts, and the coherence between various formulations is not always clear. Here, I will focus on the simplest definitions. In these simple definitions, sovereignty is a mode of government based on regulations defining what is permitted and what is prohibited, associating punishments with transgressed prohibitions. Discipline distinguishes itself by the development of pervasive technologies of surveillance and control monitoring people and their behaviour. Governmentality operates an inversion with respect to discipline, by anchoring enforcement in the self-monitoring of agents that are induced or incited to behave in a certain way. In the historical developments leading from sovereignty to governmentality, through discipline, Foucault sees an increase in "biopolitics", defined as a mode of exercising power that operates on bodies and populations, rather than on territories.

The transition from discipline to governmentality is pivotal in the contemporary applications of the Foucauldian approach, since the latter form of government is supposed to be the most recent one, and is presumably one that currently gains prominence. The hallmark of governmentality is a complex interplay between power and freedom. The basic idea is that, whereas discipline is based on relentless interventions to enforce regulation, governmentality consists in letting people enjoy and express their freedom within a certain structure of incitation.

Knowledge unmistakably plays a key-role in the definition of the three types of government, and most prominently in the case of discipline and governmentality. Anchored as it is in monitoring and surveillance, discipline feeds knowledge by accumulating data on people and their behaviour. Governmentality requires another type of knowledge, to guide interventions aimed at "conducting conducts". Economics is the form of knowledge that plays here the key role in Foucault's sketch: economics as an academic discipline emerged as governments shifted from discipline to governmentality. According to Foucault's analyses of French commercial and agricultural policies, before 1750, the State's actions consisted in grafting and enforcing regulations such as price controls, limits on exports and various prohibitions. This was discipline. Starting in 1754, a series of policy reforms inspired by "physiocrat" economists were enacted. These reforms consisted in limiting State interventions in some areas, such as the determination of grain price, based on the theory held by physiocrat economists, according to which letting people pursue their own individual interests would lead to a better state of equilibrium than the one that could have been achieved by State regulation. This was the emergence of governmentality: a regime in which a certain kind of knowledge (here, physiocrat economics), endowed with power, pilots a policy by granting people some well-chosen liberties.

Here, I will leave aside the question of whether Foucault's description is historically accurate. I will focus on what I believe to be the most important question from the point of view of conservation biologists. This question is whether the theory of sovereignty, discipline and governmentality can bear lessons to improve conservation theories and/or practices or raise awareness about the power that conservation projects might unduly (and mostly unwittingly) exert.

Foucault rarely, if at all, explicitly articulates lessons from his historical analyses. But the reader cannot resist reading these historical analyses as bearing the emancipatory lessons of a critique of the various forms of government. This emancipatory unsaid is even indispensable if these analyses are to make sense in Foucault's own vision of the intellectual as an activist. Accordingly, Foucault's writings on governmentality have been mainly interpreted as a critique of neoliberalism (Brown, 2007). However, these texts are so elusive that they have also been interpreted by Marxist analysts as a defence of neoliberalism (Lagasnerie, 2012).

There is, therefore, a need to come back to a basic question: what is the point of these analyses of sovereignty, discipline and governmentality? There are two interpretative options.

The first interpretation claims that Foucault's study is purely descriptive. In this interpretation, which is encouraged by Foucault's own reluctance to draw explicit lessons from his analyses, Foucault's historical explorations are devoid of any normative or judgmental dimensions. This interpretation has, however, three major drawbacks. First, it is at odds with Foucault's own understanding of his role as an activist and intellectual. Second, in this reading Foucault sees himself as a positivist, allegedly producing purely descriptive claims—a stance whose very plausibility is now largely considered doubtful, thanks to Putnam (2004)'s and Williams (1985)'s seminal analyses showing how blurred the positive/normative and fact/value boundaries can be. Third, from the more focused point of view of the present article, in this interpretation, there are no lessons to be learnt by conservation biologists.

The second interpretation, which is more in line with Foucault's understanding of his role, and more promising from the point of view of emancipatory projects, holds that Foucault's historical analyses are, at least in part, critical in nature. But this interpretation raises the question: what is supposed to be wrong with governmentality, and even with discipline? If a regulation is good, right or legitimate, why should we consider that its enforcement (which characterizes discipline) should be wrong? Similarly, if we have good, right or legitimate objectives, why should we deem that inciting, inducing, and making things easier or more difficult (the hallmark of governmentality) should be a bad thing? Discipline and governmentality are a bad thing only if the regulations and objectives which they are respectively based on are illegitimate, bad or wrong. Because Foucault does not even discuss the normative basis of the regulations or objectives associated with discipline and governmentality, his arguments are hence incomplete, if limited to the said. They call for the addition of an unsaid. A prominent candidate assumption to supplement the Foucauldian said is the idea that collective regulations and objectives are *always* illegitimate. At least adding this unsaid to the said allows to make sense of an otherwise incomplete reasoning.

Instead of analysing the credentials of this unsaid in general, I will focus on its relevance to conservation. In this context, clearly there is a fundamental clash between the Foucauldian unsaid and the basic assumptions of conservation methods and practices. The Foucauldian unsaid holds that all regulations and incentives are necessarily a bad thing, imposed by powerful actors or forces over oppressed people. By contrast, conservation science and practices assume that regulations and incentives can reflect the moral justifiability or goodness of conservation, and can be collectively constructed as legitimate or good. Indeed, since its inception, conservation biology has always been openly presented as based on ethical premises (Soulé, 1985). The precise nature of this normative basis has been amply discussed (Justus et al., 2009), with debates mainly opposing authors linking conservation biology with the intrinsic value of nature or natural entities, and authors emphasizing its instrumental values (Fisher et al., 2009). These debates are still active among conservation professionals (Sandbrook et al., 2011), and advocating the value of conservation is seen by many conservation biologists as a prominent task for themselves to endorse, on a par with activists (Bennett & Dearden 2014). The background of all these debates is an unanimous acknowledgement that conservation biology is based on a fundamental normative stance, according to which some things are right, good or legitimate while other are not, and accordingly regulations and incentives in line with conservation's normative basis are themselves right or good or legitimate.

Despite this basic clash between the Foucauldian unsaid and premises underlying conservation biology, I argue that Foucault's work can be useful for conservation by highlighting mechanisms through which conservation actions can (perhaps unwittingly) end up surreptitiously imposing unchecked values and objectives onto people. More specifically, the role of freedom in governmentality, as Foucault sees it, contains an interesting idea for conservation purposes. This idea is that sometimes people can be manipulated by powerful actors that give them some superficial freedom but organise things so that, by enjoying these superficial liberties, people unwittingly foster powerful actors' unchecked objectives. Foucault (2007: 49) articulates this point by claiming that "freedom is a technology of power." This phrasing is deeply ambiguous. Literally, it expresses the idea that freedom is always an illusion, which is not supported by his argument. The more modest and useful lesson from Foucault's analysis is that there exist situations in which powerful actors or systems grant certain liberties to people to better manipulate them.

Like we did at the end of the former section, let us know examine how the formal, provocative and modest versions of the Foucauldian approach to government suggest to analyse our simple Rochières case study. The formal version would point that, because conserving *Ophioglossum vulgatum* is legally mandated, its management in the Rochières area illustrates a sovereignty mechanism. By contrast, the participatory setting through which management actions were designed would be a governmentality scheme aimed at conducting the conduct of various actors, including managers and local stakeholders. As usual with the formal version, such reformulations are not meant to carry any normative meaning, and they cannot be used to draw any practical recommendation. By contrast, the provocative version would see the mandate to preserve populations of *Ophioglossum vulgatum* as an oppression, and the governmentality scheme as a manipulation of both managers and stakeholders. Lastly, the modest version would encourage critically assessing the legitimacy of the legislation, by inquiring into the criteria used to enlist this or that species. It would also suggest critically analysing the credentials of the participatory proceedings, in particular by inquiring whether some actors might have been marginalized. In this dynamics, a modestly Foucauldian conservation biologist could notice that the manager's actions to preserve *Ophioglossum vugatum* in this site are funded through an offsetting mechanism thanks to which Suez, a private business, was granted a derogation to the legislation on protected species for a development project nearby (when offsetting mechanisms underlie conservation actions, as witnessed in this case study, this basic information is not always clearly displayed, and sometimes experts do not know until the end of their mission that their work took place as part of an offsetting mechanism). Suez hence offers opportunities to implement conservation actions. However, these opportunities might give the manager the false impression that he contributes to conserving biodiversity, while in fact his contribution might merely be used by Suez to greenwash its impacts on biodiversity. The modest Foucauldian approach suggests empirically inquiring whether this really is what happened in this case (which falls beyond our scope here).

## 4 Subject formation

Another major idea in the Foucauldian corpus is that subjects are created through the exercise of the various forms of government (formulations alluding to similar ideas date back at least to (Foucault, 1966), which by far predates analyses of power/knowledge). The word "subject", as used in this context, has three different meanings, with which Foucauldian texts arguably play. According to Foucault (1983, 2012) himself, being a subject either means being "subject to someone else by control and dependence", or means being "tied to [one's] own identity by a conscience and self-knowledge". In addition, "subject" is also a synonym of the "topic" or "object" of a science (Courtine, 1990). Foucault's texts use the term with all three meanings, alternatively or simultaneously, without clarification. This ambiguity conveys the idea that, when people see themselves as subjects (self-conscious), they are in fact subject to others, owing to the fact that they belong to the subject of scientific knowledge. This ambiguity is problematic because it makes it look as though knowledge growth in human sciences and any evidence that people are increasingly self-conscious are both ipso facto evidence of an increased subjection of the people concerned. Human sciences can undoubtedly be instrumentalized to constraint people, and self-consciousness can parallel subjection. Such situations can be documented empirically, but the ambiguous conflation of the corresponding three meanings of the term "subject" cannot be considered an empirical demonstration. I argue that the Foucauldian approach to subject formation can be useful if this ambiguity is removed.

As we have seen, as opposed to sovereignty, discipline and governmentality function through the free participation of the subject. But this freedom is based on a relation of self to self that is shaped by patterns of knowledge, practices and technologies that the subject "finds in his culture and which are proposed, suggested and imposed on him by his culture, his society and his social group" (Foucault 1983, 213). According to Foucault, discipline and social sciences have an intimate relation, because social sciences create subjects by making them the subject of their scientific inquiry, and these subjects can then be subdued to disciplinary practices. Governmentality involves a new mode of subject formation, through which people are led to observe, judge and correct their own behaviour.

These claims are highly ambiguous. Just like analyses of modes of government, they can be understood in both purely descriptive or critical terms. However, just like the descriptive interpretation of Foucauldian analyses of modes of government, their descriptive interpretation is barely tenable, and drastically undermines the promises offered by the analyses. Indeed, recall that such a descriptive interpretation presupposes an implausible value neutrality, is at odds with Foucault's own understanding of his role as an intellectual activist, and would in any case be useless for conservation biologists because it would not bear any lesson for them. By contrast, if one supplements the Foucauldian said with the unsaid premise according to which subject formation, in both the disciplinary and the governmentality modes, is necessarily bad, wrong or illegitimate, then his argument appears to fulfil its emancipatory promises.

However, it is far from self-evident that this premise should be endorsed—at the very least, something is clearly missing: a logic to distinguish practices of subject formation that deserve to be denounced, from practices of subject formation that can be normatively supported—or, to use Foucault's own words, a logic to distinguish subject formation from "new forms of subjectivity" that philosophers should promote (Foucault 1983, 2016). Carpenter (2020)'s presentation of Foucault's analyses provides a candidate logic for that purpose, when she writes "subjects have agency—the freedom to act—but not autonomy—the freedom to set one's own laws." However, although Carpenter (2020) presents this as a summary of Foucault's thought, Foucault doesn't explicitly articulate such a normative stance anywhere. At most, when he states that subject formation is rooted in standards that are "proposed, suggested and imposed" to the subject, he seems to presuppose a normative vision according to which the subject should be the source of his own standards. However, because he never explicitly endorsed this stance, leaving his texts in a normative/descriptive ambiguity, a fortiori he never clarified this normative vision and how it should be applied.

If we admit, with the bulk of the conservation literature, that conservation is morally justified, we cannot see it as self-evident that leading people to align with conservation goals is bad, wrong or illegitimate. Granted, there might be a normative conflict between, on the one hand, the value that lies in letting people decide of their own objectives, and, on the other hand, the effort to lead them to endorse conservation goals. Drawing the line between practices promoting conservation that are acceptable and those that unduly impair people's ability to form their own objectives is the topic of reflections on the legitimacy of conservation action (Meinard, 2017), an explicitly normative endeavour. The critical discourse on subject formation is incomplete because it lacks such a clear distinction of what is legitimate and what is not.

More generally, beyond conservation, any educational practice typically involves "subject formation", at two levels. First, education explicitly involves the promotions of values, such as the value for recipients to have access to information, to think for themselves, to be able to make their own mind on various issues, among others. Second, education implicitly promotes values, enshrined in "thick concepts" (Williams, 1985), which impregnate it. Education cannot, however, be considered to be entirely manipulative just because it involves the promotion of values. Education rather unavoidably involves critical reflections on the values that can admissibly be promoted, why, and how.

Coming back to conservation, the ambiguity in Foucault's reasoning is that it bears lessons only in cases in which one can demonstrate that subject formation either imposes unjustifiable values or prevents people from choosing their own values. But Foucauldian analyses typically skip this questioning. As a consequence, they are either devoid of any implication, or they have to assume that enticing, suggesting, and, *in fine*, even explaining are always, necessarily bad, illegitimate, things—a radically libertarian stance, which is itself a normative stance, never explicitly endorsed by Foucault.

Most conservation projects involve attempts at enticing and/or educating some people that are considered to be unaware of and/or indifferent to environmental damages they cause or let happen. If one endorses the above radical libertarian stance, and accordingly admits that enticing and educating are necessarily bad, wrong or illegitimate things, then all the conservation project that involve them are necessarily bad, wrong or illegitimate. According to this view, conservation as a whole must be rejected. The underlying stance obviously clashes with normative ideas which have been developed and discussed in the conservation literature for decades. At the very least this normative stance and its possible implications for conservation should be discussed.

That being said, an interesting and important idea for conservation can be found behind the above untenable reasoning. One cannot embark on educating people without starting by making sure that the people one claims to educate are not more knowledgeable that one is. This is an important question that conservation biologists and practitioners should ask themselves. Similarly, enticing people to do some things might have unintended consequences, such as turning people away from contributing positively to the environment. Conservation biologists have to pay due attention to such possibilities. This is all the more important given that, as Western conservationists, at least some conservation biologists can have the tendency to think of people as agents interested in economic gains, always adapting their conduct based on cost-benefit, individual-scale analyses. Empirical studies of attempts at subject formation in other domains suggest that attempts based on such assumptions often fail. For example, Lazar (2004) shows that, although microcredit schemes attempt to turn beneficiaries into market-savvy entrepreneurs, their rare successes appear to "rely upon the women's existing networks of family and friends, and associated cultural understandings and obligations" (Lazar, 2004, 306).

Hence there are important lessons that can be drawn from Foucault's analyses of subject formation, once ambiguities and overstatements are removed, and once the Foucauldian said is supplemented with a reflectively clarified vision of education and its normative foundation. But there is a gap between saying that conservation biologists should be careful not to discard local knowledge and not to disturb virtuous practices, on one hand, and saying that incentives and education are always necessarily perverse, on the other hand. Contemporary empirical analyses of subject formation, inspired by Foucault, such as Agrawal (2005)'s, illustrate empowering processes of subject formation that, far from being manipulative, cannot but be seen as positive. Phrasing the presentation of such a positive process in the terms of "governmentality" and "subject formation", with associated critical connotation (such as, for example, the idea that subjects are "subjects to someone else by control and dependence", as Foucault puts it), is bound to be confusing.

To illustrate the outcome of this discussion on subject formation in our Rochières case study, the formal Foucauldian approach would claim that the manager, technicians and local stakeholders supportive of the project were moulded as subjects as they appropriated the objective to protect *Ophioglossum vulgatum*. The provocative version would construe this internalization as the hallmark of a manipulation. The modest version would rather see it as the result of successful education to conservation values, but would emphasize the need to make sure that recipients' own values were duly respected. Here again, the formal version appears empty, the provocative version grotesque and the modest version useful, but barely original.

## 5 Conclusions

Analyses of power relations underlying conservation projects or intertwined with them are of foremost importance for conservation biologists who strive to understand the various aspects of their interventions. Discourses and associated practices can, in some cases, play a key role in sustaining, reinforcing, and making these power relations invisible. Because Foucault's philosophy is, to a great extent, devoted to analysing relations between power and scientific discourses, it is a major source to think this issue through.

However, as opposed to what authors like Carpenter (2020) claim, Foucauldian texts cannot be considered to be a "toolbox" that can directly apply to the analysis of conservation thought and interventions. This is because Foucault's texts are elliptical. Foucault is characteristically cautious to avoid certain questions, such as the clarification of his normative stance, and the precise lessons that should be drawn from his reasoning. These gaps in texts play key rhetorical roles: they both allow developing various interpretations of the texts by supplementing them with unsaid assumptions, and they conveniently allow rebutting criticisms. For example, Foucault's texts are so ambiguous that both critics and advocates of neoliberalism can find arguments that suit them in his texts, but if one finds a flaw in a Foucauldian critique or apology of neoliberalism, a Foucauldian advocate will always be in a position to claim that this flaw was no part of the original text.

Such ambiguities deeply undermine attempts at developing concrete applications of the Foucauldian approach. This article was an attempt at clarifying some of these ambiguities, in line with particularly powerful applications such as Fairhead & Leach (1996)'s. In this attempt, I mainly argued that three elements are pivotal to relevant applications of the Foucauldian approach: first, clearly distinguishing knowledge and truth from discourses; second, clarifying normative assumptions underlying analyses of power and, finally, striving to clarify unsaid assumptions.

If Foucault's philosophy is interpreted in this clarification effort, it contains powerful, thought-provoking clues to analysing power and discourses in conservation contexts and beyond. Key lessons from such a clarified Foucauldian rationale are, among other things, the need to identify hidden value-judgements and diffuse power relations, to pay due attention to the complex interplay between discourses and practices, and to be wary of all-too easy *cui bono* analyses.

Using a very simple case study, I have illustrated promises and pitfalls of various versions of the Foucauldian approach. No doubt that more complex situations call for subtler analyses, in which the modest Foucauldian approach might have much more added-value. Other aspects of the Foucauldian corpus, such as for example his analysis of the notion of "milieu", open avenues for analyses of other ecological disciplines, which could usefully complement the conclusions reached in the present article (on this issue see, e.g., Taylan (2014), Devictor (2018) and Devictor & Bensaude-Vincent (2016)). Similarly, Foucault's later works, which take their distances with the concepts explored in this article (e.g., Foucault 1994), can cast a retrospective light on these concepts. Future works exploring such issues are needed to strengthen our understanding of possible contributions of the Foucauldian approach to conservation knowledge and practice.

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