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The pitfalls of plural valuation

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This paper critically examines the current political context in which valuation studies of nature are undertaken. It challenges the belief that somehow, more and technically better valuation will drive the societal change toward more just and sustainable futures. Instead, we argue that current and proposed valuation practices risk to continue to overrepresent the values of those who hold power and dominate the valuation space, and to perpetuate the discrimination of the views and values of nondominant stakeholders. In tackling this politically sensitive issue, we define a political typology of valuations, making explicit the roles of power and discrimination. This is done to provide valuation professionals and other actors with a simple framework to determine if valuation actions and activities are constructive, inclusive, resolve injustices and enable systemic change, or rather entrench the status quo or aggravate existing injustices. The objective is to buttress actors in their decisions to support, accept, improve, oppose, or reject such valuations.

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Introduction

The recently approved methodological assessment of the diverse values and valuation of nature the intergovernemental science-[1] has ushered momentum for a new, plural way to perform valuations to contribute to global sustainability and justice goals [2]. Valuation of nature is defined as "*a process which is consciously undertaken to generate information on values* [*of nature and nature-human relations*], *to support* [*often collective*] *decisions*", which goes beyond valuation as defined or realized within specific disciplines or traditions. The Summary for Policymakers [3] provides constructive, action-oriented, and optimistic pathways for considering diverse values in decisions about nature, and addressing injustices in terms of whose values are

advanced or ignored. However, behind our feeling of common achievement, we share a growing concern that these goals cannot be achieved through technical improvements or simply by considering more diverse values, but requires addressing the political aspects that influence how power and exclusion *affect* valuation of nature. If valuation is to leverage transformative change, recognizing plural values alone might not be sufficient, or even counterproductive, if deeper leverage points [4] are not adequately addressed. We argue that in many cases, undertaking a valuation study may not be the best idea. By providing examples and a simple framework to critically assess the power balance within a given valuation context and by pointing out diverse options to take position with or against valuations, we hope to counter depoliticization of the valuation debate. Assessments, especially when labeled 'methodological' such as the intergovernemental science-policy platform on biodiversity and ecosystem services (IPBES) VA, tend to follow a linear model and render the politics of science implicit [5]. The emphasis of particular technical knowledge over other forms of knowledge is an unacknowledged political act [6,7] that circumscribes what solutions are promoted at the science-policy interface by, for instance, IPBES and Intergovernmental Panel on Climate Change [8,9]. This implicit politics of assessment is accompanied by a risk that more explicit political requirements are also unexamined [10], for example, if 'more valuation' is intended to achieve empowerment of marginalized groups, it will require explicit political agendas to disrupt rather than reinforce existing knowledge and power hierarchies.

This paper takes stock from the collective learning within the IPBES Values assessment and presents some critical points regarding current valuation practices, to (re)open the debate on some of the more politically sensitive issues, such as who dominates and whose values are (over)represented in the valuation process (see also Ref. [11]) These questions are inherent to real-life political contexts in which valuation occurs [12] and resonate with environmental injustices increasingly reported globally [13,14]. While issues of power and conflicts were already raised by the IPBES VA, they remain underemphasized in the summary for policymakers, due to the political nature of negotiating this text among 139 member governments. There is, in fact, very little evidence on *actual positive impact* of valuations on decisions — let alone on sustainability — [15], while evidence on the *risks* of valuation (i.e. the failure to incorporate the full diversity of values, and the distraction from actual political strategies) abounds in all valuation disciplines [16]. Therefore, in this reflection paper, we seek to repoliticize valuation by (a) deconstructing the pragmatic — and sometimes naive — narrative around valuation, which implies that 'more and better' valuation will spur societal transformative change, and (b) offering some critical examples, reflection, and a simple framework to help various actors define their position toward a given valuation. To this end, we first introduce a political typology of valuation along dimensions of power and discrimination (Section *The hidden politics of valuation: some typical examples*). Then, we discuss which conditions should be met for valuation to improve sustainability (Section *Valuation as an instrument of oppression and depoliticization*) and point to limitations of the plural valuation discourse (Section *The plural valuation band-aid*). Finally, we conclude by defining how one's positionality toward a given valuation offers different avenues to tackle injustice in/of a given valuation, hereby highlighting that each valuation choice — even technical — has political consequences.

The hidden politics of valuation: some typical examples

The ways in which valuations are applied politically are diverse. Without providing an exhaustive overview, we focus on a few typical examples of the many ways in which power imbalances and self-interest percolate through the complex mechanism of valuation of nature. While this remains an unexplored field of study and an area of awareness-raising, we offer some intuitive examples and provide real-life cases for each of those mechanisms. The examples run horizontally through economic, noneconomic, or other disciplinary classifications of valuation. Even if some of these problems are mentioned in the literature as issues of a certain discipline (mostly outside of the authors' field), they actually emerge from the actors' political purposes and strategies, and can be found throughout various valuation methodologies and scientific disciplines and traditions.

Discriminative valuation is one of the more obvious examples: powerful actors produce a valuation directly in their own interest and use this as a power lever to trump other actors' interests and values. Typical examples occur when economic cost–benefit arguments or Environmental Impact Assessment (EIA) are used by companies to coerce governments for destruction of natural areas without involving affected stakeholders and not-clearly stating tradeoffs for the environment. One of many examples is the poor EIA performed by Nigerian oil industries to satisfy regulatory requirements for obtaining environmental permits [17]. Other examples are found in deliberative processes with overrepresentation of powerful or privileged social groups [18].

Appropriative valuation is an example of a more devious version of the former. In slightly less authoritarian contexts, valuation processes are set up to be more

participatory, representative, and/or inclusive, but in the end, a powerful minority uses these qualities to push for an outcome that advances their private benefits. Examples are the application of tokenism-participatory processes in urban planning or rural appraisal, or the application of concepts such as ecosystem services while not accounting for locally specific values or values that do not fit an ecosystem service category [19], or concrete cases such as the efforts to incorporate indigenous knowledge in buffalo restoration projects in North America, which involved soliciting details of relational valuation based on kinship. But in the absence of a political agenda to restore control over territories, this move to incorporate relational values fails to support indigenous empowerment and is considered manipulative because it exploits the assessment of values to reinforce the case for ecologists' case for species reintroduction [20].

Repressive valuation exemplifies a partly overlapping strategy. Openly repressive valuations serve to offensively discredit or dismiss legitimate claims of opposing actors (e.g. with arguments such as 'actor subjective perceptions' versus 'expert facts', such as the fracking industry in the Marcellus shale region in the United States, which framed natural gas development to the general public in a positive light of patriotism and environmental sustainability while framing those against the project as irrational obstructionists) [21]. More covertly repressive valuations also occur, for instance, when engaging the (potentially) opposing actors, thereby utilizing their time, energy, and buy-in otherwise available for opposition, while their concerns are not or only partly integrated, such as several cases of public participation in climate policy [22].

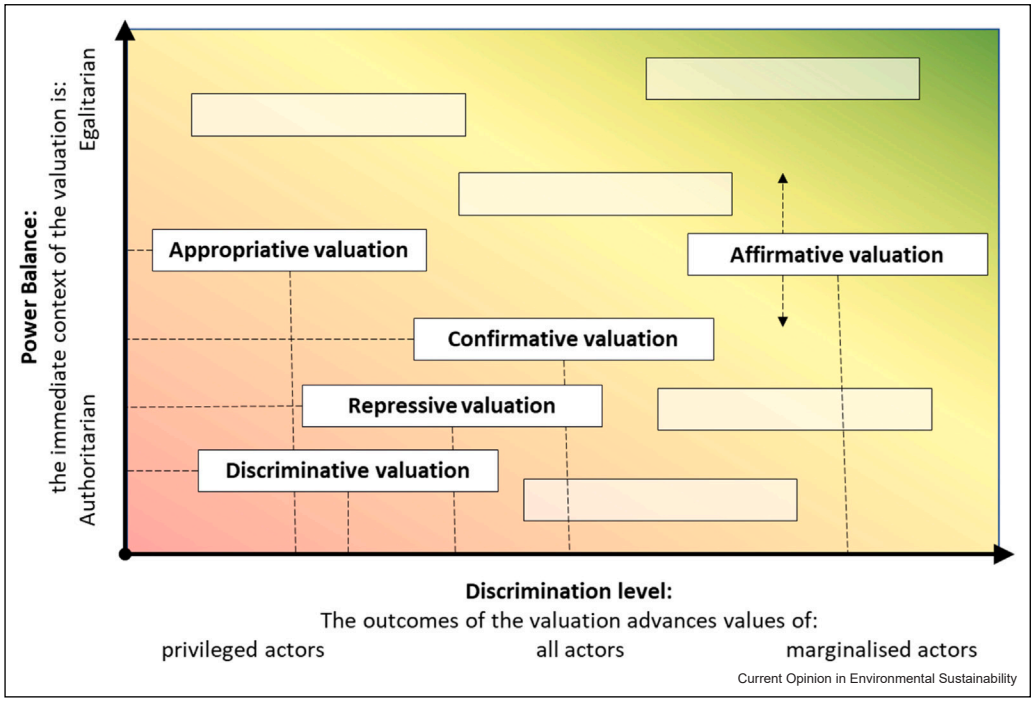
Confirmative valuation takes place in a more balanced power context, and brings a more diverse set of values from different actors to the decision table. However, it does not transform anything in the sense that such valuations will confirm, reproduce, and perpetuate existing imbalances and the status quo of vested interest. While this seems a more 'just' valuation compared with the former types, its reactionary potential lies in perpetuating the belief that equality (all actors get the same regardless of their starting position) always suffices to obtain equity (weaker actors get more, stronger actors less, to level the playing field) [23]. Moreover, confirmative valuation is often applied to justify decisions already taken, and build credibility and acceptance within broader actor groups, such as the inclusion of multiple actors and values in decision processes on greenhouse expansion in Almeria, Spain, which then revert to unsustainable scenarios [24,25]. Another very common valuation type that could be described as 'commissioned-but-then-ignored', exemplified by the lack of reported uptake of valuation studies ([14], see also Ref. [26]), might also fit this category.

Affirmative valuation is an example of a valuation that actively counterbalances injustices built into history, place, and social arrangements. It exists in authoritative as well as egalitarian contexts, and is often initiated and implemented by discriminated groups and/or their allies, as these valuations depart from an equitable representation, meaning that they mostly advance those actors who are less privileged and vice versa, instead of treating all actors as if they have equal privilege. For instance, Ecuadorian plaintiffs from the Ecuadorian Amazon filed a class action lawsuit on behalf of some 30.000 Amazon inhabitants against Texaco for environmental and social damage, forcing the company to economically compensate the affected communities [27].

With these explorative examples of the politics behind valuation, we aim to demonstrate that power imbalance and discrimination impacts (intended, unintended, positive, or negative) can be made explicit. Using such explicit qualifiers of valuation politics (e.g. manipulative, coercive, enlightened, contestative, transformative, corrective, and valuations), might help to assess valuations already accomplished, or stimulate reflection and contestation of particular valuation practices. In very broad terms, valuations can be organized along two theoretical axes: the power balance within the process and the discrimination impact of the outcomes. The political complexity of valuation contexts evidently includes spatial and temporal scales, a diversity of power configurations, and reasons for discrimination and intersectionality, yet these two axes provide an accessible, intuitive framework to spur discussion and critical reflection without the need for deep understanding of political ecology. Figure 1 positions the examples above along these gradients, and recognizes the existence of many more political examples (empty boxes in Figure 1).

The power balance of the valuation context reflects the varying ability of actors to affect decisions and actions in the immediate context surrounding the valuation. By 'immediate context of the valuation', we mean all the actors directly affected by/involved in the valuation, including its commissioning, funding, execution, and communication [28]. Power comes in many forms, and can be organized in several types such as instrumental (referring to one's direct power over another), structural (determines what actionable options make it to the agenda), and discursive (determines what options people are likely to consider) ([29], see also Ref. [11]). In its simplest form, the power dimension (y-axis in Figure 1) starts from a highly skewed distribution of power at the lowest point on this axis, where a single non-representative group holds power within a society or

Figure 1



A few typical examples of the politics of valuations in a power balance/discrimination-level plane. Each of these have a specific way of how the power imbalance produces discrimination, either unintended or deliberate, either invisibly or obviously. The empty boxes emphasize that many other examples of valuation politics are still to be described (see text).

collective (i.e. 'authoritarian'). Consequently, the scope and narrative of a valuation, the selection of methods, quality criteria, and available resources are determined by a privileged few. Shifting higher along the Y-axis, power becomes more evenly distributed among all relevant actors, leading to increasingly more balanced influence on valuation choices and criteria (i.e. more 'egalitarian'). Note that power balance within a group or collective can differ from the 'overarching' power structure. For example, a general assembly-based municipality can exist within a dictatorial state as well as an authoritarian workfloor situation can exist in a predominantly democratic context.

The discrimination level of the valuation outcome (x-axis in Figure 1) reflects the extent to which the values held by diverse actors are excluded or included in the decisions based on the valuation (see also Ref. [30]). Such value expression and oppression can operate along gender, cultural, spatial, and knowledge-type lines, and extend to nonhuman actors, future generations, and nature itself. At the lowest level of the discrimination axis (y-intercept in Figure 1), only the values of a small group of the privileged are reflected in the decisions, with the majority of other values oppressed. Moving away from the y-intercept, more diverse values of the whole of society are reflected in decisions. Continuing even further to the right on the x-axis, marginal or discriminated groups' values are more strongly represented in the decisions. However, valuations might reflect diverse values in their out*puts*, but the decisions made on the basis of these outputs, that is, the out*comes*, may still serve only the values of the powerful few, if in the valuation context there are only changes in the discursive power (what is being valued) but not in the instrumental or structural power (who determines the decision space and makes decisions).

Valuation as an instrument of oppression and depoliticization

Valuation practices are not introduced into neutral social arrangements but are implemented in existing ways of governing conservation and restoration of nature. Existing governance systems are diverse, providing considerable differences in the extent to which actors can control decisions that affect their lives [31]. For instance, conservation interventions that involve local leadership and empowerment have been linked to better social and ecological outcomes [32–34]. But, good social arrangements — on any scale — are unlikely to be produced through 'more valuation', on the contrary, valuation can distract from the real political motivations behind a decision. Proponents of plural valuation need to be aware that these conditions need to be actively

developed first for valuation to meet justice and sustainability goals instead of perpetuating or aggravating existing environmental injustices. Some crucial questions to address are: how to actively form these governance conditions? Is that meaningful within a valuation project context [35]? Who should take responsibility for this? And how discriminatory are the thresholds to engage in/with the valuation?

Indeed, the capacity to conduct valuation and to act upon the results of valuation was found to be highly uneven not just across different regions of the world, but also across different actors [36]. This capacity is a multidimensional concept that includes not just the technical capacity but also the ability to bridge across knowledge domains, to represent someone's own value perspective, to trust others and respect their choices, or to develop an inner motivation to act upon such diversity of perspectives [37,38]. Co-developing such capacities at the societal level is one of the main external conditions to obtain valuations that effectively move toward justice and sustainability [39]. It is critical to realize that each actor has something to share and learn from, being this the traditional knowledge of local actors, the methodological and analytical advancements achieved by scientists, the power of enactment and law enforcement of policymakers, or the motivation to struggle and bring transparency to politicized issues of political actors. Combining and improving these existing capacities through bridging, negotiation, networking, and sometimes conflict helps develop shared interests, and brings marginalized social groups to the center as capable actors (see also Ref. [40]).

The plural valuation band-aid

In an optimistic response to this, plural valuation proposes to include more diverse values and stakeholders. This is essentially an avenue in the much bigger field of participation in environmental decision-making [41]. This body of scholarship identifies multiple benefits from inclusion: justice benefits arise from meeting people's rights to recognition and to influence decisions that are salient to their well-being; instrumental benefits facilitate conservation effectiveness, for example, through increased buy-in and reduced conflict; substantive and constructive benefits involve improved outcomes arising from better — more diverse — knowledge and learning [42,43]. But studies of participation also highlight massive gaps between rhetoric and reality, pertaining to our arguments to recognize and better understand particular risks associated with naive valuation agendas. The challenges are wide-ranging, many of them technical (whose values to include, how, where, when, etc.) but are mostly underpinned by issues of power [44]. A naive participatory agenda assumes that more diverse valuation is a means of empowerment of marginalized groups. But power pervades society in governance arrangements, discourse, knowledge systems, choice of valuation methods, and so on [45]. Within science-policy processes such as IPBES, the turn to 'co-production' is a form of participation that recognizes the need to diversify knowledge but may often fail to achieve empowerment due to pervasive power inequalities [10]. Attempts at participation that are naive to power can be perverse, potentially producing a valuation discourse that renders the causes of oppression invisible, and co-opts communities into supporting these.

Many — if not most — environmental conflicts and injustices require urgent action to prevent further permanent damage or escalation. This makes plural valuation a risky choice. Even if the necessary capacities are developed and conditions fulfilled, and a plural valuation could be realized, the question remains whether this is an effective use of time, capacities, and resources. The longer a valuation takes, the higher the chance that outputs come too late, and irreversible decisions or actions on the ground are taken. Moreover, in case the valuation is ignored or overruled by decisions, the spent time and resources are wasted and the valuation can be perceived as appropriative or even (covertly) repressive, whether intended to or not.

Even when dealing with a valuation within its 'safe operating space' [14], there are structural risks and dilemmas involved, regardless of the valuation type. For instance, cooptation can occur in affirmative-type approaches, when these are met with skewed power structures and end up with a valuation that only co-opts the marginalized groups instead of empowering them to act upon their values. Self-exclusion can occur when attempting an affirmative valuation, trying to engage and give voice to marginalized groups, but when these groups refuse to collaborate (e.g. because of feeling co-opted, earlier bad experiences, lack of trust in the system, or lack of capacities), the valuation ends up as being confirmative or appropriative. Also, the understanding of 'marginalized' is a question for reflection, as a group that is globally privileged might be discriminated against in a local context or vice versa. This is especially tricky when actors claim their discrimination as a means of wielding power.

Conclusion: making strategic and moral choices

In a world where environmental conflicts abound, it often only takes the ancient question '*cui bono*' — who benefits — to clearly demonstrate obvious injustices. In many — if not most — environmental conflicts, the first concern is to build capacity for political, legal, or extra-legal processes (see Ref. [35]) rather than advocating for plural valuation and complex analysis. As an actor involved in (or affected by) a valuation, the options are to

collaborate, critically influence, transform, reclaim, resist, or contest a valuation. As a valuation practitioner, the option exists to refuse collaboration with appropriative, repressive, or discriminative valuations. Similarly, one can choose to critically challenge confirmative valuations from within or outside, to support or initiate affirmative valuations, or to switch to other political strategies altogether. For decision-makers who commission, interpret, or assess valuations, it is important to be aware that even well-intended valuations might not lead to legitimate, inclusive, or acceptable outcomes, and that resistance is to be expected when actors are confronted with injustice.

Note that all of the concerns mentioned here go beyond mere 'valuation of nature' as defined in the IPBES assessment on diverse values and valuation and pertain to broader processes of collective knowledge generation, deliberation, and decision-making.

Our conclusions also challenge institutions such as IPBES to reflect on the implicit politics of knowledge coproduction: what is the position of their assessments — that are essentially large, global valuations — in the global political arena? Are all legitimate voices being included in the assessment processes? Are dominant epistemologies disrupted or reinforced? What are the consequences of resource allocation choices between conducting assessments and supporting capacity-building? What is their commitment to (self-) transformation, equity, and affirmative action? What would be the most effective contribution to actual transformative change? In particular, the intention and scope of some 'methodological' IPBES initiatives such as the transformative change assessment and the nature futures framework would deserve some critical reflection in that sense.

With these reflections originating from the IPBES Values assessment, we hope to reopen the debate on the hidden power dynamics, inequitable distribution of benefits and burdens, and the actual political purpose nested within valuations of nature. Understanding these political intentions and power dynamics is a critical step toward making valuations transparent, visualizing contrasting values, and making political agendas explicit. Continuing naive valuation will lead to pervasive outcomes, regardless of their (communicated) intentions. Our simple recommendation — to practice, policy, and research alike — is to be critically aware of the actual political context in which a valuation is undertaken. It is essential to consider the 'why' *before* the 'how'.

Data Availability

All data on which this perspective is based are available in the IPBES methodological assessment on diverse values and valuation of nature.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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- • of special interest
- •• of outstanding interest

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The values assessment is a 'methodological assessment regarding the diverse conceptualizations of the multiple values of nature and its benefits, including biodiversity and ecosystem services' as set out in IPBES/6/INF/9. The overall scope of the values assessment is to assess multiple sources and traditions of knowledge regarding diverse values of nature, including the strengths and weaknesses associated with existing valuation methods and approaches to make such values visible. The assessment provides conceptual and practical tools to aid policymakers in the recognition and accounting of nature's values in different decision-making contexts. The values assessment provides guidelines, criteria, tools, and a road map to navigate the ways in which values play out in decisions, as well as the role values and valuation, can have in achieving more sustainable pathways. It should be noted that the assessment does not provide quantifications (e.g. in monetary or other indicators) of the diverse values of nature across the globe, as its emphasis is on methodologies.

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This chapter links diverse values of nature as communicated through different value articulation (' valuing ' and valuation) processes to decision-making and its outcomes. It reviews the underlying causes of treating impacts on nature as external to, and ignored in, decisions by current political, economic, and socio-cultural actors and institutions (i.e. conventions, norms, and rules) and describes how on-the-ground drivers of nature's decline can be transformed towards recovery, focusing on land and sea use. The modalities and practice of explicit valuation of nature (preceding chapter) in support of decisions, and the decision-making processes themselves, may need to evolve further to achieve global sustainability goals, the CBD 2050 vision of living in harmony with nature, and the recent Kunming Declaration of the CBD.

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The primary objective of this chapter is to identify key considerations for making valuation choices and developing guidance for improving valuation practice. To this end, the chapter synthesizes existing knowledge on valuation methods in order to identify the range of valuations that exist, how they have been applied, and what their limitations are. The chapter assesses the potential of valuation methods to elicit and make sense of diverse values.

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The overarching objective of Chapter 6 is to provide options which enable a system wide transformation towards just and sustainable futures by incorporating nature's diverse values in decisions made by diverse actors. Four specific goals have been identified as part of this overall objective: (1) to assess how the values of nature are incorporated in policy instruments, in valuations supported by decisions, and in biodiversity-related initiatives, (2) to identify policy options within and across sectors that engage with diverse values of nature for transformative change, (3) to highlight existing gaps and challenges and identify capacity development needs and options, and (4) to guide the operationalization of nature's diverse values in decision-making {6.5}.

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