Value is simple. Valuation is Complex.

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Abstract

To newcomers to the field value can appear so complicated as to not only seem a terribly intimidating topic, but also one that is actually fruitless to pursue. That is, the concept of value, as an object of study and lever of political change, is either a dead end or best left to the experts. We disagree. Value is a critical and potentially straightforward concept in need of further theoretical and empirical exploration. At the most general level, having value can be understood as having the capacity to be measured and compared against another thing (or a standard). This is consistent with Marxian concepts (which are elaborated with special reference to the specifically capitalist value form), but it is also simple and general enough to provide an easily-transportable frame for discussing the role of value and measurement in any context imaginable, whether it be a discussion of spiritualism, collective action, economic data, or physical science. Marx directs our attention to the political constitution of systems of measure on the very first page of *Capital*, and there is now a great deal of work in geography and in science and technology studies on the social constitution of systems of measure and valuation. We believe this crucial topic deserves an accessible approach that can reveal unities among Marx's work in Capital, and thus supplement technical valuation practices with the moral and critical political economic critique made possible by Marxian value theory.

Keywords: value; politics; performativity; regimes of value

The ultimate stake of politics... is not even the struggle to appropriate value; it is the struggle to establish what value is.

David Graeber (2001, 88)

To all but the dedicated theorist value can appear so complicated and amorphous as to seem like terribly intimidating and fruitless object of study. That is, the concept of value seems either a dead end or best left to the experts. At a recent geography conference, it was argued by some eminent theorists that studying 'value' is a fascinating but ultimately fruitless task. We disagree. At its root, value is the quality of being measurable and comparable with other things. We believe this general definition is consistent with a broad swathe of critical approaches whose differences usually rest on *valuation regimes*—the rules for and modes of comparison—rather than on the concept of value itself. If it is true that the terms 'value' or 'values' are used in ways that seem incompatible, it might also be that we are being distracted by their apparent dissonance and ignoring their elements of unity. Understanding value as the capacity to be measured or compared lets us see how apparently incompatible value regimes flow from foundational choices about what is to be counted, visible and present. These choices are social practices that can represent real levers of change. Multiple ways of comparing and measuring things are usually co-present in all settings, and yet those regimes are all predicated on the capacity for index, either qualitative or quantitative. Our observations in this article engage specifically with examples from capitalist valuation practices, but we argue that value-asmeasure is applicable across any political-economic arrangement. It remains important to theorize and understand the capitalist value form and its extension into nature, but it is equally important to understand how capitalist value is situated alongside other types of values, forming a basis for political intervention. Recognizing the co-presence of valuation regimes is one path towards contesting the expansion of the logics of capital on the terrain of nature.

Value as a concept, and *valuation* as diverse and often dissonant social practices, can be as complex as you like. One need only refer to contemporary Marxist value-form philology, the construction of models for predicting climate change, or any piece of church doctrine to see the logical contortions made possible by a concern with values and the systems of measure by which to ascertain them. There has also been an academic trend since the 1990s to consider value theory—and especially its normative implications—as inherently a project of "left-over, would-be intellectual imperialism" (Graeber 2013, 221), a project that many social sciences were defining themselves against. Our inability to talk about value except in the most convoluted of theoretical terms means we are ceding the field of comparison and measurement, along with its normative consequences, in social life.

Sometimes this surrender takes the form of a gesture at the fundamental, analytically paralyzing *in*comparability between, for example, the commodification of forest carbon and the livelihood strategies of indigenous people. And because value is the ground on which the assessment and ranking of objects and goals takes place, this gesture comes close to ceding politics entirely. Finding incompatibility between values is not an endpoint, but must lead onward to questions of how such incompatibilities are socially constituted through different measures and often reconciled in more or less violent or absurd ways. Forest carbon and indigenous lives are often made measurable in the same value regime; the laws and guns that are often nearby when this happens show that valuation is political work. To claim instead that indigenous livelihoods are incomparable, inimitable, *in-valuable* is to retreat from politics and the imperative to find a better and more survivable way of translating the value of their lives for a broader audience. Understanding this should be a priority for political ecologists, given our

shared commitment to understanding, as well as contesting, the fuller and deeper entry of capital into the socionatural world.

Investigating the incompatibility of the capitalist value regime with other ways of measuring the world must not end with an anticlimactic gesture at axiomatic differences, safely bracketed. Doing value theory means stepping out of that safety, because these incommensurabilities do not prevent them from having material impacts on the world (Holm 2007). We must not, as Blomley (2008, 1840) says, "risk ignoring the ways in which such absurdities organize the world for us in often brutally efficient and powerful ways." These apparent incompatibilities in regimes of value may not be just, desirable, or even fully knowable, but they remain forceful. The rationale for any social strategy rests on agreements (both formal and tacit) about what constitutes a value or is valuable. The choice of what to include in and exclude from representation of value is always political, as is the indexification of the resulting abstractions.

Usually, the key elements of a social system are naturalized and walled off across an epistemic frontier, as with the axiom within mainstream economics that value is a strictly unobservable mental preference whose only proxy is price in a clearing market. It is the job of the value theorist to show how and when these divisions are actively maintained, performed and reinforced—usually in a way which is meant to be invisible or non-agential. At the current juncture, this requires us to pay careful attention to the extension of capitalist values into new realms, but simultaneously not ignore the broader value-laden context in which these expansions occur. For example, the fundamental assumption of carbon trading is that emissions, no matter where they occur or for what purpose they are released, must be treated as fully fungible. Achieving fungibility rests on practices of measure and commensurability between different greenhouse gases and attaching that measure to a monetary price signal, despite the instability of the scientific equivalencies that make gases measurable through a single metric—global warming potential (MacKenzie 2009). This process lacks a moment where we evaluate the relative desirability of different emitting activities, so, following Felli (2015), climate pollution from powering a school and from refining yacht fuel must be treated equally despite the glaring discrepancy in social import. Each of these practices requires choices informed by regimes of value to be taken, and so each represents an entry point to politics.

Value is so foundational, in fact, that it is everywhere—even and especially in the basic scenesetting task of distinguishing objects from each other so that distinctions can be made and dramas can unfold in the theatre of difference. Much of the study of value, therefore, focuses offstage, before objects become obviously distinct. Since the point of a successful regime of valuation is to become natural and non-controversial (when was the last time you heard someone debate the true measure of the gallon or the kilogram?), searching for those moments when valuation is visibly contested in the light of day can be a lonely task. But if value is the debate about how we estimate things relative to a moral horizon, there is no more important work. Arguing about whether one thing is taller or bluer or more expensive than another is important, but so is the decision that inches, electromagnetic frequency, or dollars will be the measure used, and so is a discussion of who these decisions marginalize and silence. The measurement of the thing is not as important as the settlement about what measurement is and what ruler will be used.

Systems of Valuation

How do we conceive of such a polysemic word in a unified way? Graeber (2001) observes a tripartite division in how the term is used, distinguishing between moral, semiotic and economic valences of value; all are used in the iterative performances of comparison that form a central part of any culture. This process-oriented understanding reminds us that nothing, be it cultural or natural, is intrinsically valuable; value is found, affirmed, realized, or destroyed through ongoing social performances of comparison and measure. Those performances assess *moral* value when they compare things against how they ought to be, they assess *semiotic* value when they use comparison to distinguish between different objects, and they assess *economic* value when they compare things for the purpose of exchange, often denominated in units of money. While different regimes of valuation may be used in different moments, and considerable tension is observed when such valuation practices change, a single concept of value encompasses all such moments.

As a result, value as a concept may be simple, but the practices of valuation often are not. Creating social contexts within which comparison is possible and achieving commensuration through an indexical system are difficult, delicate tasks. Indeed, they are some of the most elaborate and arcane behaviors in any human society. However, the ultimate goal is always to create the possibility for comparison through the representation of phenomena in quanta of money, national happiness, pounds of phosphorous emitted from a wastewater treatment plant, and so on. In Graeber's sense, the capacity to quantify is the capacity to delineate what something *is not* through semiotic representation; one pound of phosphorous is *not* 1.1 pounds. The method by which one ascertains whether or not a wastewater treatment plant has emitted 1 or 1.1 pounds is a socio-technical practice¹ that flows from the decision to quantify effluent for the purpose of constraining its emission in the first place. This, in turn, flows from a commitment to classify substances that are potentially harmful and to measure their effect against an index of (abstract) human health, and to do so in a way that makes effluent available to capitalist valuation. So, underlying the drily scientific 'value' of 1.1 is the normative and

¹ This is a stylised process of measure, the selection of semiotic values, and their relationship to co-present valuation regimes. Other considerations include the appropriate level of accuracy in measure, moral valuation of species other than humans, and the issue of which humans' health is valued. This is true of any example we might choose to present because values, as a practice of indexification, are always built upon ever more ontologically entrenched valuation regimes.

moral 'value' of human well-being, which then makes the underlying effluent legible for economic valuation and potential exchange.

Integrating Regimes of Valuation

There are many ways to study value, but we see a good opportunity for collaboration between Science and Technology Studies (STS) and political economy. If one accepts Graeber's typology of values-in-process as a system of comparability, STS can help to unpack the 'how' of value while political economy (particularly of a culturally-inflected variety) is more attuned to the 'why' of value. That is, STS is able to examine the technics of comparison and measurement, and political economy can provide the analysis of power relations by which a measurement is allowed to become a standard and the social basis for comparison. Once we understand the semiotic and political-economic valuations in a given setting, we can evaluate the moral basis and implications of these regimes and compare them with what ought to be (Fourcade 2011). Christophers (2014) notes, in the context of the study of markets, that political economy and STS (or 'performativity approaches') have long been portrayed as at odds with one another, or even as antithetical, before offering a conceptual path toward reconciliation. We point to a similar synthesis for thinking about value(s) by suggesting that political economy and STS are amenable to reduction using the frame of value, and so provide crucial perspectives on practices and regimes of valuation. This approach recognizes that it is not only metrics or only exploitation that make social atures: both are essential parts of a fully functioning capitalist regime of valuation, a utopian moral value regime that makes these socionatures not only possible but desirable (McCloseky 2006; cf. Zizek 2008).

A combined STS/Marxian approach to value is powerful because Marx's concept encompasses economic and moral valences of value, while valuation studies and STS allow for sophisticated understandings of semiotic valence, the task of creating distinctions between things, performed by people with specific motivations and in particular contexts. Observing how valuation is done becomes critical as technocratic forms of environmental management proliferate. Technocratic measurement techniques are often bundled with the capacity to obfuscate the moral values that sanction their use. However, a focus on technical processes of valuation doesn't require subscribing to a 'flattened' ontology wherein all things (as actors) have an equal capacity to (re)create socialnatures (cf. Lave 2013). Rather, we suggest focusing on the people who perform valuations that make natures legible to capital. An STS approach can guide us to the point at which we are able to see the *technical* barriers to commodifying ecosystem services (Dempsey and Suarez 2016), the imprecision of measurements in CO_2 emissions (MacKenzie 2009), or the difficulties of determining when a degraded stream has been adequately restored (Lave 2012). But STS tends not to show us the social conditions under which an attribution of value allows the circulation of these objects in exchange. This happens when specific people in specific places argue for, modify, or consent to a valuation regime. In their daily lives they (and we) encounter and use many different such regimes. One of them articulates the capitalist

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value form, and it may underlie important actually-existing power structures, but its complicated and non-deterministic relationship with other valuation regimes is one way of understanding the spaces of anti- or non-capitalism, and opportunities for change (Gibson-Graham 2006; Moore 2015).

If they engage with value at all, most geographers are used to thinking about (or around or against) value as defined by Marx, who was concerned only with the specific regime of measuring value native to the capitalist mode of production (see Huber 2016). Understanding this special, dominant form of value is clearly important, but it is just as important to understand the extent to which the capitalist form co-exists with many others. For Marx, the measure of value in capitalism is not physical labor per se but abstracted "socially necessary labor-time." The object that bears this kind of value only becomes visible and measurable after a set of social agreements about how effort is measured and how the products of effort are guantified and distributed. Even then, much trouble has ensued from the confusion between a) the achievement of comparability and b) the units in which comparison is made. Thus, price is not value in the same way that an inch is not height. Marx's usefulness as a value theorist is in part that he draws us firmly back to the moral valence of value that is explicitly excluded when one considers only the units in which valuation is performed. For Marx, the appropriation of value created by others is a cause of immiseration (Karatani and Wainwright 2012) and those who wield the value form actively obscure its basis. Therefore, one way to resist the inequities of capitalism is to observe the daily and often technical ways that non-capitalist practices and regimes of valuation are subordinated to the capitalist value form. This project takes on increasing urgency as we reach the end of cheap nature (Moore 2015) and ever more facets of the environment come to be represented through a regime of value in which comparisons are denominated in money, as in payments for ecosystems services and the practices of natural capital accounting on which they are based.

Politics of Values

Political possibilities are varied when taking this approach. For example, depending on the setting, one could choose to prioritize (in Graeber's taxonomy) *moral* values, i.e., "nature is not for sale" (McAfee 1999) or controversies about whether it is morally acceptable to create markets in human organs (Roscoe 2013). One can strategically deploy or repurpose *economic* valuation, contesting existing valuation practices by specifically acknowledging the competing valuation regimes that are already baked into any price representation (see Kallis et al. 2013; cf. Matulis 2014). This approach is exemplified by Fourcade (2011) in her discussion of the different valuation outcomes in French and US oil spill litigation. French moral discomfort with the chosen valuation regime led to legally incomprehensible metrical descriptions of nature, which ultimately led to different and arguably worse outcomes than the (still deeply flawed) valuation process applied in the US in the Exxon Valdez disaster. A politics of value *qua* measure must be able to simultaneously engage with and go beyond the value form of capital, such that

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capitalist value is made visible as a special case of a broader principle for investigation and action. In any argument over value, such an approach can advocate for immediate environmental protections and compensation damages (that is, economic value) while leaving open the possibility for outright rejection of the long-term suitability of those measure on justice or ethical grounds (that is, moral value).

We propose that more scholars should grapple with value in its various guises, seeking to find the ways in which these overlapping regimes are productive as well as incompatible. Value as both concept and social practice is too important and too ubiquitous to be ignored. We need more engagement with the forms that capitalist regimes of value take, how they are made, and how they might be reconfigured to create more just socionatural outcomes. One example of this approach is the work being done around California's greenhouse gas cap-and-trade market, where scholars including Haya (2015), Asiyanbi (2016), MacAfee (2016), Osborne (2015) and Lohmann (2015) are actively engaging in both semiotic and moral value-work of contesting the expansion of the state's GHG offset program to include jurisdictional REDD+ carbon credits. While not always explicitly framed in terms of value(s), their work provides an example of how different forms of arguments that fall under and between the rubrics of moral, economic, and semiotic value can be used to contest the expansion of explicitly capitalist values into new natures.

Fortunately, we have the tools to investigate and potentially challenge valuation regimes from both within and without. Where the valuation regime of capital is less firmly entrenched, the extension of capitalist logics (and by extension, morals and semiotic regimes) may be more effectively countered by mobilizing marxian political economic critique. On the other hand, valuation operating in technocratic bureaucracies may instead call for critical engagement with the values embodied in technical artifacts that form the basis of novel commodities in subsumed in capital (Corbera 2014). By taking the view that value is simply the possibility of measurement, analysts of value can toggle between the subpolitics (Beck 1996, cited in MacKenzie 2009) of the technocrat and the "big P" moral politics of contesting what *ought* to be. Struggles over value are struggles over what *counts*: by contesting important moments, political economic or techno-scientific, we are contesting—and perhaps changing—what value is.

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