

to this idea whereas others found it liberating? More generally, which aspects of BoC were most helpful and were they the ones most easily used by the XLab groups? **Q2**

« 6 » I am particularly interested in how to bridge gaps between alternative objectivities. Recently, Fritz Reusswig (2020) pointed out that recognizing and accepting the different positions on climate change is not enough and that the implications of different positions need careful consideration and evaluation. In the domain of climate sustainability, the different positions have economic implications that diverge when oil companies face climate-change activists. As the divergence between deeply opposed “objective realities” is becoming more violent, these differences are becoming increasingly problematic. In these circumstances, civic engagement may be a viable approach (Gash 2022). In Gash (2020), I describe that when disagreements are deep, opposing views are polarised between well-identified groups of people and their identity makes change very difficult. In my work, I found that finding a context where different views could be discussed was helpful, though in the case of stereotypes this was often not possible when the stereotype was part of the observer’s identity. Are there details concerning use of BoC that were helpful that could provide guidance in these fraught circumstances? **Q3**

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Potential Contributions to a Critical Cybernetics

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> Abstract • I seek to build upon Whitaker’s progress in bringing insights from Maturana’s corpus to bear in consensual operational domains. By connecting Whitaker’s methods to the work of other cyberneticians and offering an approach to systemic racism as a “test-case,” it seeks to connect Whitaker’s work to an emergent critical cybernetics that shares similar concerns.

« 1 » Randall Whitaker has taken on a fraught and formidable task in seeking to wrest applicable tools for “research and development” projects from a corpus that, as Whitaker acknowledges, “rarely address[es] artifacts with which observers may interact” (§23) and in which references to “physical space” and “realization” are still shrouded in some ontological uncertainty (§12). He has, however, seemed to have had some success in addressing consequences for consensual domains of interaction generated by the operations of the interacting observers in their domains of description. In this commentary I will attempt to build upon this success by briefly exploring the potential contributions of similar applications within the framework of a proposed critical cybernetics: a nascent domain of cybernetics that has been discussed at some recent conferences and owes much of its impetus to the late Klaus Krippendorff.¹ Those involved in these discussions seem to share Whitaker’s desire to mobilize the epistemic insights of such thinkers as Maturana in ways that have tangible, consensual consequences across the many operational domains of the various “doings” through which we construct our social world. One dimension of this program of research and application, inspired especially by Werner Ulrich’s critical

1 | https://www.youtube.com/watch?v=VnF8_enkWKM

systems heuristics,² concerns the making explicit of often tacit operations of distinction undergirding programs of social intervention. In the paragraphs that follow, I will attempt to connect Whitaker's Maturana-inspired technique of *domanial qualification* (§27) with the work of other cyberneticians and systems thinkers, as well as that of anti-racist scholar Ibram Kendi, in a sort of "test case" of what some dimensions of a critical cybernetic approach might look like. The domain of application will be *systemic racism*.

Fundamentals

« 2 » Whitaker identifies an "entitative bias" in our everyday acts of distinction (§55) as a tendency that Maturana's thinking resists in order to avoid "misconstruing a given act of distinction as extracting or highlighting something already extant and available" (§56). Instead, Whitaker offers us the notion of the "eduction" of a particular unity by an observer to remind us that this is an active, observer-dependent operation, and that the educed unity includes the context in which the distinction takes place as well as "the context within which interactions with the educed unity can be properly described as exhibiting strict accordance with its original distinction" (§57).

« 3 » A call to resist the "entitative bias" in much of our thinking and communicating has been present in cybernetic scholarship for some time. Gregory Bateson (1979) urges us to abandon the practice of making "characterological descriptions" of things through which we think of the characteristics we identify as "inhering" in the objects themselves rather than as emergent phenomena generated by systemic interactions. This applies not only to more obvious examples like our experience of color but also to such phenomena as *hardness*, which Bateson would rather we describe as, at least, two sets of interactions.

“‘The stone is hard’ means a) that when poked it resisted penetration and b) that certain continual interactions between molecules among the molecular *parts* of a stone in some way bond the parts together.” (Bateson 1979: 61, emphasis in original)

« 4 » At a conference convened by Bateson, Anatol Holt went a step further by insisting on a movement to "stamp out nouns." He hoped that our "fascination" with them might "be replaced by a fascination with process, which does not depend on a prior conception of a set of entities" (quoted in Bateson 1972: 63). As an alternative to linear subject-predicate sentences as a default mode of description, Holt sought new ways to "depict process" and developed elaborate graphic representations of system states, known as "Petri nets," in order to "depict a set of objects and defining relations between them; then change would be represented by a shift in these relations" (ibid: 165).

« 5 » Indeed, Andrew Pickering's broad survey of the work of early British cyberneticians (in which he includes Bateson) identifies an ongoing commitment to a "performative ontology" throughout the field (Pickering 2010: 25) that runs back at least as far as Ross Ashby's declaration that, as "a theory of machines" cybernetics "treats, not things, but *ways of behaving*. It does not ask 'what is this thing' but, rather, *what does it do*?" (Ashby 1956: 1, emphasis in original). This "anti-entitative" emphasis on relational processes rather than on reified things has been further underwritten by Maturana's biology of cognition, Heinz von Foerster's (1976) notion of eigen-behaviors, and Ernst von Glasersfeld's (1995) radical constructivism more generally. When our entitative tendencies are "mitigated by recognizing, and restoring attention to, the critical roles attributed to relations and relational context in Maturana's work" (§62), new kinds of conversations about troubling and contested social phenomena become possible. In particular, the language of these conversations might circumvent the tendency of entitative, ontological labels to polarize observers and paralyze discourse, by sending us down fruitless avenues in search of "proof" that some "thing" *is* or *is not* unequivocally what we claim it to *be*. While we might still be left with arguments in favour of "proof" that a

particular systemic interaction performs or does not perform in the manner we claim, a *performative* ontology brings with it an element of mutability of the described phenomena that is often foreclosed in an *entitative* ontology. In a sense, this element of mutability "lowers the stakes" in terms of the perceived need by some conversational participants to defend against the kind of "final word" that can seem to be the outcome of an *entitative* ontological description.

« 6 » In order to maximize the possibility and efficacy of these new kinds of critical conversations, we must also lean into "Maturana's consistent framing of various factors in terms of domains, combined with his exacting manner of defining such domains and delimiting both their scopes and their contents" (§25) in a process that Whitaker calls *domanial qualification*. Such a process can perform the kind of work done by Ulrich's critical systems heuristics in building a shared and transparent understanding of systemic boundaries distinguished by structurally coupled observers in conversation.

« 7 » In her editor's foreword to Maturana and Gerda Verden-Zöller's (2008) *The Origins of Humanness in the Biology of Love*, Pille Bunnell synthesizes Maturana's explication of domains into a warning against our tendency, in day-to-day communications, to "operate under the implicit assumption that all we speak and all we know exists in a single domain called 'reality'" (Bunnell 2008: xi). This is dangerous because, "as each distinction also brings forth the domain in which it is valid, each domain also reveals some regularity in our living and obscures others" (ibid). Further –

“Our pedestrian rules of logic are valid within any given domain, but become problematic if we shift domains, as we may easily do without noting it, even in the middle of the argument. Logical constructs only work properly as long as we are careful not to cross domains. Paradoxes arise when we do not pay attention to changes in domain.” (ibid: xii)

The tendency identified by Bunnell is particularly pernicious when we are conversing regarding complex social issues in urgent need of attention.

« 8 » In the following section, I will attempt to apply Whitaker's anti-entitative

2 | "A brief introduction to critical systems heuristics (CSH)," by Werner Ulrich, ECOSENSUS project website, The Open University, Milton Keynes, UK, 14 October 2005. http://projects.kmi.open.ac.uk/ecosensus/publications/ulrich_csh_intro.pdf

stance, with a nod to *domanial qualification*, to the phenomena of systemic racism in a manner that might model a critical cybernetic approach.

A performative ontology of racism

« 9 » While most definitely not eschewing both the entitative and characterological uses of the term *racist*, Kendi (2019) gestures towards a definition of *racism* as a system state, understood as a dynamic configuration of a system stabilized around a particular equilibrium point unless otherwise perturbed,³ that is conducive to an anti-entitative critical cybernetic approach. He states that *racism* “is a marriage of racist policies and racist ideas that produces and normalizes racial inequities” and that “[r]acial inequity is when two or more racial groups⁴ are not on equal footing” as evinced through under-representation in such demographics as the percentage of Americans living in owner-occupied homes (ibid: 17).⁵ If we choose to focus upon the system-state description of racial inequity, we can then devote our attention to the “ideas” and “policies” as descriptions and constraints that interact to *perform* the emergent system state of racial inequity, rather than getting bogged down in arguments about them as entities in

which the characteristic “racist” either does, or does not, inhere. This approach is not suggested in the name of preserving white comfort in the face of difficult conversations but, rather, in the pragmatic hope that it can pre-empt typical and oft-repeated “defensive routines” (Stermann 2000: 75) performed by those invested in said policies that can end up deflecting attention from the current system-state description and shutting down discussions regarding potential approaches to its reconfiguration before they can fully get underway.⁶ Such a discussion is also greatly assisted by a focus on some form of *domanial qualification*. These factors combine in the example below. I must make clear that my analysis of this example, and the opinions expressed therein, are entirely my own and do not reflect a shared, articulated position held by my colleagues or by the larger institution.

« 10 » In 2020, my home academic unit undertook a self-study designed by our institution’s Office of Equity and Inclusion called the “inclusivity self-assessment tool” (ISAT).⁷ While there is no indication that the tool’s design was directly influenced by cyber-systemic theory, it did guide us to generate systems-state descriptions of our operations on a domain-by-domain basis; beginning under the broader headings, Campus Climate and Culture; Recruitment, Retention, and Success; Learning, Research, and Engagement and then breaking down into more tightly defined domains such as Communications; Physical Space; Events; Formal and Informal Leadership, and many more.

« 11 » Generative discussion took place highlighting particular realms of operation where the *performance* of racism, employing Kendi’s definition, was, indeed, taking

6 | A noteworthy outcome of Kendi’s definition is that an act of *discrimination* is not necessarily *racist*. For instance, a preferential hiring policy designed to address inequitable representation in a particular occupational field is considered an example of *anti-racist* discrimination (Kendi 2019: 19). This position is entirely commensurate with the *performative* approach suggested here except that it would be described as *performing* anti-racism.

7 | <https://equity.ubc.ca/resources/activating-inclusion-toolkit/isat-download>

place in ways amenable to shared description, regardless of whether or not it could be concluded that any of those responsible for the design and ongoing implementation of those operations, or the department or institution as a whole, could be said to possess the inherent characteristic, *racist*. In other words, as Holt puts it, our description did not “depend on a prior conception of a set of entities” (quoted in Bateson 1972: 63). Subsequently, we were able to move directly towards consensual collective action to reconfigure the domain without locking into intractable conflict around ontological, characterological claims.

« 12 » As a specific example of how a process akin to *domanial qualification* facilitated the identification of particular processes generating consequent system states, the hiring of adjunct faculty was revealed to be an operational domain continually reproducing the under-representation of non-white instructors through a dynamic interaction of last-minute identification of hiring needs triggering outreach to usual networks of potential instructors that had already been determined in their make-up by decades of white dominance of the field. Through bypassing any hunt for a particular “entity” within this process that could be identified as “racist,” those involved in the discussion displayed an increased openness to the idea that they may, indeed, be participating in the *performance* of racism, regardless of the positive self-evaluation of their own intentions or carefully protected self-descriptions as “non-racist” that might have, otherwise, triggered defensive routines and escalating inter-personal conflict between the discussants. Once described in this fashion, new operations within the domain (adjustments to timing of hiring, specifically targeted outreach and recruitment efforts) to enable a new system-state that does not continue to *perform* racism could be collectively designed and implemented.

Conclusion

« 13 » As with Canadian society at large, there is still much more work to be done to generate system-states of racial equity across the many operational domains of our institution and we must continue to accelerate our efforts in this direction. While the modest successes we had might not obviously de-

3 | In the spirit of such constructivist approaches as soft-systems methodology (Checkland & Scholes 1999), a “system” is considered to be a set of interacting elements distinguished and bounded through the operation of an observer and not as an extant entity to be “discovered.”

4 | From a constructivist perspective, it is, perhaps, important to emphasize that “racial groups” also arise in acts of distinction performed by observers. While long considered biologically meaningless, the categorization of groups of peoples according to shared characteristics distinguished in the phenomenal domain (e.g., skin color) is still socially commonplace. Kendi is distinguishing and describing observations of differential outcomes across various domains (housing, income, prison populations, health) accruing to groups thus distinguished.

5 | An important corollary to this definition of racism is the assertion that the absence of any explanation for this inequity grounded in policies and ideas assumes that the inequity experienced by a particular group is due to some quality of inferiority inherent in that group.

pend on the kind of cyber-systemic insight generated by Maturana's BoC, moments in the ISAT process when we did struggle were often directly connected to our inability to more precisely delineate the operations constituting particular domains, indicating that the application of more cyber-systemically refined approaches informed by thinkers like Maturana, such as Whitaker's *nichepicking* (\$30), could well prove a powerful and welcome addition to such a process. Whether or not this will lead to a wider and deeper appreciation of Maturana's legacy remains doubtful. However, as society at large, and universities in particular, continue to wrestle with other complex systemic issues of social justice, such as *colonialism*, in which an entitative stance and un-reflective crossing of domains can wreak havoc on pragmatically productive conversation, tools like those promulgated by Whitaker are likely to be acutely needed.

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Five Questions about Humberto Maturana's Way of Seeing and Explaining our Human Living

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> Abstract • Maturana's body of understanding is an epistemological shift that can only be experienced as a profound transformation as a result of letting go of the assumption of an observer-independent reality. This imposes some restrictions to the formalization of it. I share reflections and questions to set the distinctions of certain critical elements that could compromise Maturana's proposal.

«1» Understanding what Humberto Maturana wrote is not an easy task. The epistemological shift he proposed is not only a profound transformation of the way

in which we see and understand, the happening and the awareness of the living: it is also a different physiological and psychic disposition towards observation as we let the happenings and experiences of our living appear. More precisely, it is the way in which Maturana experienced living and his particular disposition to it. When we read his work, we read about the way he lived.

«2» Randall Whitaker's pursuit to establish an academic discussion and set criteria to define a field of work with the intention of generating an effective understanding, useful application and extension of biology of cognition (BoC) is a bold and courageous endeavor. Maturana used to say that "who applies does not understand and who understands does not apply"; Like an *eastern proverb* or even a Zen master teaching, it is intended to evoke reflection upon a state of presence to witness the expectations that may be making us pursue the sound of one hand clapping.

«3» I choose to reflect upon Whitaker's endeavor by pointing out some – in my own understanding – critical distinctions of Maturana's explanation about the nature of living beings, cognition and human living in *language*. The first of these is his desire to conserve understanding as impeccable as possible in the desire to avoid misconceptions and misuses of such a complete body of understanding. The way in which I shall do this is by sharing five questions that arose after considering Whitaker's article as a whole, which may invite the reader to enter the realm of a reflexive conversation regarding some critical elements that are specific and particular to Maturana's vision. To preserve their reflexive and stimulating character, I will not provide any definite answers for any of these questions, though.

Question 1 What are the implications of our material constitution and its operation, including our nervous system?

«4» Maturana (2020) stated that all living beings conserve their living in an organism–niche ecological dynamic unity, as molecular autopoietic entities. Given that we are made of molecules that, in their mutual interactions, generate molecules of the same class, we are at the same time both the result of the interactions and the happening