

Post-Quantitative Methods for Critical Engagement with Secondary Data

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Abstract

In this paper, I articulate a post-quantitative (postquant) approach to working with secondary data, even when its driving questions and instruments reinscribe oppressive social structures. I explore some of the posts—poststructuralism and posthumanism—as frames to support inquiry and action meant to overcome the dehumanizing oppressions of our contemporary moment. Drawing from relational materialism, I articulate methodological assumptions, aims, and practices that might be used as a flexible and practical companion to other critical quantitative approaches (e.g., QuantCrit, criticalist quantitative, etc.) undertaken from diverse sociocultural perspectives (i.e., of race, patriarchy, coloniality, heteronormativity, etc.). Postquant enacts a concern that our use of quantitative data may reinscribe systems of oppression, and asks what we might choose to do instead.

Objectives

Critical scholars have shown how quantitative inquiry can be dangerous for social justice work (Gillborn et al., 2018; Zuberi, 2001). Danger, however, need not imply incompatibility. Foucault asserted that “if everything is dangerous, then we always have something to do” (Dreyfus & Rabinow, 1983, pp. 231–232). In this paper, I offer a post-quantitative framework (“postquant,” hereafter) as “something to do” with secondary data, even when its driving questions and instruments reinscribe oppressive social structures. I explore some of the *posts*—poststructuralism and posthumanism—as frames to support transformation-oriented inquiry and action meant to overcome the dehumanizing oppressions of our contemporary moment. Drawing from relational materialism (Kuntz, 2018), I articulate a set of methodological assumptions, aims, and practices that might be used as a flexible and practical companion to other critical quantitative approaches (e.g., QuantCrit, criticalist quantitative, etc.) undertaken from diverse sociocultural perspectives (of race, patriarchy, coloniality, heteronormativity, etc.). Postquant inquiry begins with data as an entry point for mapping what we are currently in the process of becoming, such that we may exceed the present. Thus, the “post” in postquant refers to moving beyond the hierarchies of domination that constrain the possibilities of our present. Postquant aims to extend our capacity to refuse the violence of our present day as a “power to say no in the mode of ‘I would prefer not to’” (Braidotti, 2022, p. 239). Starting with the idea that we would “prefer not to” reinscribe systems of oppression, postquant is a means of exploring what we might choose to do instead.

Theoretical Perspectives

Affirmative ethics (Braidotti, 2017), is a means of choosing what to do with postquant, such that we may “actively and collectively work towards a refusal of horror and violence—the inhuman aspects of our present... to bring affirmation to bear on undoing existing arrangements, so as to actualise productive alternatives” (p. 302). Postquant is specifically oriented toward *actions of undoing* (vs. resisting, for example) existing structures. I share the QuantCrit perspective that existing structures have already influenced our sense of what counts as meaningful data to collect (e.g., Gillborn et al., 2018). Therefore, I see secondary data as a particularly generative starting point for the work of undoing the status quo. Garcia and Mayorga (2018) have written about the promise of secondary data as a site for disrupting oppressions. They have also expressed concern that the Frankfurt school of critical theory may counterproductively strengthen marginalizing systems. Rather than a critique of Marxian views on class processes, some problematizations of the Frankfurt school take the form of arguments that the work of social justice will be co-opted in service of white patriarchal interests (Bhambra, 2021; Garcia & Mayorga, 2018). I see this type of critique as rooted in a desire to avoid “elite capture” (Táiwò, 2022), an observable systemic behavior in which progressive social movements tend to be steered toward maintenance of the status quo. Similar to Garcia et al. (2018), I contend that ontology is a productive entry point for critical inquiry. Here, the *posts* are particularly helpful as a source of ontologies that bear little relation to those that drove the last several centuries of coloniality and domination. A postulate of postquant, then, is that inquiry guided by ontologies foreign to the present unjust status quo complicates the process of elite capture.

Local Process Ontology

Process ontology (Nail, 2019, 2024) drives the assumptions, methods, and questions of postquant. Process ontology is the idea that matter is inherently in motion; any apparent stasis is illusory. As in posthumanism (Barad, 2003; Braidotti, 2022), Nail asserts that historical and ongoing patterns of domination are constituted by claims of fixed group identities that become organized into hierarchies of oppression. Within stable hierarchies, humans are “above nature, men above women, reason above emotion, white skin above brown skin, the first world over the third world, citizens above migrants, straight above queer” (Nail, 2024, p. 7). Process ontology does not allow for the stasis needed to sustain eternal hierarchies that become the basis for “natural” systems of domination. Similar to Nail, Karen Barad (2003) identifies “thingification,” the conflation of dynamic processes as static “things,” as a concrete action that sustains oppressive hierarchies. Because the notion of what something *is* may suggest a static notion of *being*, process ontology orients inquiry away from questions of what something *is* and toward what something *does*.

An ontology foreign to the structures of the status quo may be disruptive but also minimally useful if the ontology is unproductively foreign to us as critical researchers. Ontology, after all, makes claims on the nature of being, and process ontology’s rejection of any static enduring identity may feel incorrect. Nail (2019) documents how dominant ontologies have shifted over time and are thus temporally *local*. Further, Nail provides historical accounts of simultaneous presences of multiple ontologies at particular times in history. Because ontologies can be local, process ontology does not need to make universal Truth claims, nor does it require exclusive status as “The” ontology. Consequently, I understand process ontology as both productively foreign to hierarchical domination and congruent with critical frameworks that were

developed from different onto-epistemological assumptions. Process ontology offers the potential for different *methodological* commitments for inquiry, and does so without asking for the *personal* commitment of belief.

Relational Materialist Inquiry

Relational Materialism (Kuntz, 2018) is a methodological framework that turns poststructuralist and posthuman critiques of the social world toward practices that may exceed the perceived limits of the status quo. Relational materialism and its “processual logic” (Kuntz, 2018) orient a process ontology toward a particular focal point for methodological inquiry: mapping our processes of becoming so that we may work to become differently. Critical to postquant, relational materialism postulates that the future is not yet determined. Consequently, what the future might become is not limited by what we can imagine from the present moment, nor is it limited by our ability to envision specific pathways to get from the present to a more just and affirming relational future. A role of relational materialism within inquiry, then, is to swerve us into alternative patterns of relationality from which we may simply follow flows that were previously unknown because we had not yet mapped the present (Kuntz & Wooten, 2023). In conjunction with process ontology, the notion that the future is not yet determined necessarily orients postquant away from typical focal points for quantitative analysis: predictive modeling, establishing causality, and documenting significant differences among populations. Since the goal of postquant is to use quantitative inquiry to move us, collectively, toward an alternative set of affirming relations, postquant is undertaken with the resolve that the that the deficits of the present¹, their causes, and their consequences for future prediction can become irrelevant through

¹ Whether such deficits are understood as markers of policy, achievement, or any other difference

our work to create new patterns of relationality. We may acknowledge the historical record that progressive change has come through alignment with White interests (Gillborn et al., 2018) without taking it as a dilemma (Bell, 1980) that implies we must wait until such a realignment occurs again, or that the work of social justice is to usher in such an alignment. I see postquant as enacting the notion that “critical quantitative analysis not only requires reflection regarding the types of questions asked, but it also encourages reflection in terms of the data employed to answer those questions” (Williams, 2014, p. 19). Asking how secondary data may be used to drive practices toward exceeding the limits of the status quo allows for a different type of engagement with secondary data. Importantly, since the goal is no longer to explain or predict, postquant engagement with secondary data does not automatically foreclose the use of any particular quantitative techniques. Thus, postquant may provide an affirmative means of engagement with quantitative inquiry that acknowledges serious questions of just how “critical” normative quantitative inquiry can be (Davis & Saunders, 2022; López et al., 2017; Van Dusen & Nissen, 2020).

Orienting Toward Data

Postquant is an *orientation* toward quantitative data, and not a particular sequence of analytical techniques. For a specific postquant study of a large dataset, see [blinded]. A postquant orientation is one of methodological commitment to assumptions, aims, and practices that enact a process ontology with resolve that the future is not yet determined.

Postquant Assumptions

As above, the assumptions of postquant are 1) that the future is not yet determined; 2) methodological commitment to process ontology can facilitate inquiry that drives us to potential relations that exceed the status quo; and 3) no particular quantitative techniques are necessarily foreclosed.

Posquant Aims

Postquant inquiry orients toward the human problems of domination and exploitation, and the posthuman problems of collectively becoming in affirming patterns of relation with each other and the material world. Of course, postquant does not lay exclusive claim to a desire to overcome inequity, violence, and oppression. What is perhaps distinctive about postquant is its focus on questions of immanent ethics (Smith, 2007): through quantitative inquiry, what are our capacities for social change? How can we come into active possession of our power? How do we work toward accessing un-sensed potential? Rather than *explanation*, postquant orients toward *praxis* - “reflection and action upon the world to transform it” (Freire, 1970, p. 25).

An aim of postquant engagement with secondary data is to identify what *more* we may do when we do not know how our engagement with quantitative data might overcome the status quo. Postquant supports the work of critical quantitative inquiry by facilitating engagement with: 1) additional techniques (as no particular techniques are automatically foreclosed); and 2) secondary data with problematic framings of participant identities (Zuberi, 2001), collected with instruments that were not designed to answer “critical questions” (Stage, 2007).

Postquant Practices

Postquant comprises an iterative cycle of mapping relations and establishing arenas of *potential* for different relations. Postquant maps may then be used to sense “the way in which things are leaking out-not so that we can capture them, but [so that we] can follow their trajectories” into arenas of potential (Kuntz & Wooten, 2023, p. 92). A postulate of relational materialism is that anything (thus any type of quantitatively-produced map) may serve as an entry point for material change. Briefly, I suggest three entry points, not as fixed objects for replication but flows for others to follow off of the edges of their own maps. 1) reassessing the role of model residuals, standard error, noise, higher-order effects, etc.– these represent the edges of maps of models; 2) mapping the relationships among discrete quantitative *techniques*, and the effects of their combination into methodological practices–particular combinations of techniques establish edges; and 3) the relations among individuals and communities–articulating community membership (e.g., what it means to be a critical quantitative researcher) sets edges. Postquant inquiry may discern whether perceived edges are un-actionably static or productively porous for taking us elsewhere.

Conclusion

The postquant approach I describe here developed from my engagement with a large, problematic, dataset and the belief that its massive quantity of information might be used to inform recommendations for justice-oriented science teacher praxis. Through engaging with post-frameworks, my affective orientation toward critical quantitative inquiry changed from feeling stuck to sensing abundant potential. There is undeniable tension between our present world, structured by historical and ongoing hierarchies of domination and violence, and our

resolve that a world without such structures of oppression is possible. Through postquant, we may enact a determination to consider any data as an entry point to critical engagement that maps and moves us, collectively, into more just relations.

Scholarly Significance

To my knowledge, this work represents the first attempt to use post-frameworks to inform an approach to critical quantitative inquiry. I believe this approach orients toward a different sense of what we might ask of research outcomes, such that critical scholars may engage in critiques of quantitative *methods* and their histories (e.g., Zuberi, 2001) without losing access to any quantitative *techniques* that might advance social justice. In conjunction with standard quantitative techniques, the local ontology of postquant allows for its simultaneous use with other methods and critical perspectives.

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