

Diffraction as a Method of Critical Policy Analysis

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ABSTRACT

Recent developments in critical policy analysis have occurred alongside the new materialisms in qualitative research. These lines of scholarship have unfolded along two separate, but related, tracks. In particular, the new materialist method of diffraction aligns with many elements of critical policy analysis. Both involve critical theory, complexity and multiple analyses. To examine diffraction as a potential method of critical policy analysis, this paper enacts Karen Barad's method of diffraction through the theoretical writings of Jane Bennett and Gloria Anzaldu'a. Using the example of teacher leaders who are involved in educational policy, Bennett's vibrant ecologies illustrate ecosystems of teacher leadership and Anzaldu'a's borderlands demonstrate how teacher leaders bridge their roles within multiple layers of community, governance and identity. Through the method of diffraction, critical policy analyses may produce broader perspectives regarding the ways in which differing stakeholders, groups, technologies and even theories collectively shape policy. Significantly, understanding educational policy differently may result in better educational policy-making.

KEYWORDS

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Critical Policy Analysis

Within recent years, educational policy scholars have increasingly turned their attention toward critical policy analysis, a re-energized methodological field in which educational policies are analyzed through critical theories (e.g. Diem & Young, 2015; Young & Diem, 2014). The growing emphasis upon different forms of critical policy analysis, however, represents a marked departure from conventional approaches to policy studies. Although critical policy studies were advanced by Marshall (1997) and Taylor (1997) nearly two decades ago, leading scholars, since then, describe the larger body of educational policy research as methodologically narrow and atheoretical (e.g. Ball, 1994; Lather, 2006; Scheurich, 1994; Webb, 2014; Young, 1999). Given that objectivist policy research assumes that complex cultural issues and human behavior can not only be reduced into cause-and-effect prediction models, but also can be reshaped and resolved through policy-making, normative approaches to policy research remain problematic.

The field of critical policy analysis offers an important intervention. Because critical policy analysis approaches policy-making as a dynamic and complex process, it challenges objectivist assumptions that policy inputs will lead to intended policy outputs. Rather than view policy as linear and rational, therefore, critical analyses view policy 'as the outcome of historical and social contexts and power relations' (Eppley, 2009, p. 2). In doing so, critical policy analyses further examine how policy interacts with philosophy, theory and methodology (Taylor, 1997). For example, in an early critical policy analysis that blends theory with methodology, Young (1999) conducted what she



termed a 'multifocal policy analysis'. She combined traditional interview methods with critical readings in a multi-theoretical 'process [that] involved viewing from one lens and subsequently reconsidering the phenomena from another' (p. 679). As Young demonstrates, methods of multifocal and critical policy analysis understand policy through the lens of critical theory.

Developments in critical policy analysis have occurred alongside the new material feminisms in qualitative research. These lines of scholarship have unfolded along two separate—but related—tracks. As critical policy scholars in education have read policy through theory, qualitative researchers also have used theory to do the same. This, as I shall explain, has particularly been the case with regard to *diffraction*, a qualitative method of analysis that involves conducting multiple theoretical readings upon a sin- gular set of data. Diffraction functions as an analytical kaleidoscope; with each turn of the kaleidoscope, analyses multiply as data are diffracted into different arrays of pat- terns. Although diffraction draws from the new materialisms, diffraction aligns with the tenets of multifocal policy analysis and critical policy analysis with each being grounded in critical theory, complexity and multiple analyses. Yet because critical and diffractive analyses have developed along parallel lines of inquiry, the two bodies of research have yet to intersect and inform the other. This raises the question: *How might diffractive readings contribute to critical policy analysis*?

In response, this article seeks to advance a critical approach to educational policy research through diffraction. By considering the different perspectives and knowledge generated by critical and diffractive policy analyses, educational researchers may gain a broadened awareness of the available tools for educational policy studies. Moreover, researchers may gain tools that emphasize difference. Critically theorized methods of diffraction emphasize difference in policy research, including differences in how policies are produced, implemented, experienced and imagined. Attention to difference potentially creates methodological openings that foster different ways of making and understanding policy.

Diffraction as Methodology

The roots of diffraction primarily stem from the new materialist theories of Haraway (1997) and Barad (2003, 2007, 2014). Both authors borrow the term diffraction from the physical sciences, in which diffraction describes the phenomenon that results when waves encounter an obstacle and bend. In this sense, most qualitative scholars define diffraction as a change in movement, or a produced effect. According to Haraway (1992), 'Diffraction is a mapping of interference, not of replication, reflection, or reproduction. A diffraction pattern does not map where differences appear, but rather maps where the *effects* of difference appear' (p. 300, emphasis in original). Barad later builds upon Haraway's work to create a diffractive methodology. For Barad (2007), 'a diffractive methodology is a critical practice for making a difference in the world. It is a commitment to understanding which differently, it is a cutting apart and a piecing together (Barad, 2014).

Diffraction involves conducting multiple layers of analysis upon a singular set of data, often through theoretical readings. As an emergent method of analysis within qualitative research (Lenz Taguchi, 2013), diffraction offers an 'alternative vocabulary and different technology for critical inquiries' (Kaiser & Thiele, 2014, p. 166). In this respect, the alternative vocabulary of diffraction draws from the critical theories that inform the methodological concept, as well as additional critical theories through which data may then be read. The reading and re-reading of data through theory then provide the analytical tool through which diffraction occurs. Growing numbers of educational scholars have begun to perform diffractive readings on data (e.g. Bode'n, 2015; Davies, 2014; Jackson & Mazzei, 2012; Lanas et al., 2015; Lenz Taguchi & Palmer, 2013; Palmer, 2011; Phillips & Larson, 2012; Lenz Taguchi, 2012).



Diffracting Data

To illustrate how diffractive readings might inform critical policy analysis, this paper re-reads dissertation study data (Ulmer, 2015b) through multiple theories: Jane Bennett's political ecologies and Gloria Anzaldu'a's B/borderlands. The methodological objectives of the dissertation study were twofold: conduct a policy analysis and a series of diffractive readings upon a single data-set. The first objective aimed to con- tribute content area understandings of how US teacher leaders were using digital technologies to write about and influence educational policy (Ulmer, 2015b). Yet in following the norms of the field, the initial policy analysis remained without theory. It was instead a subsequent diffractive analysis that repeatedly read data through theory to see what might be produced; the second analysis considered how teacher leaders crossed multiple political borders and how their policy organizations functioned within vibrant ecologies (or dynamic organizational networks). This paper focuses solely on the second, diffractive analysis.

To explore diffraction as a method of critical policy analysis, this paper draws from the interview portion of the data-set. In-depth interviews were conducted with nine high-profile teacher leaders in the US; initial phone and video interviews with each participant were followed by an electronic written interview. Participants were selected based on their involvements in state and federal policymaking, membership in national teacher leadership organizations and active online presence in social and mass media. Interview questions examined their experiences as teacher leaders in each of these areas. Because this is a niche community, lists of influential bloggers and snowball sampling techniques were used to identify participants. Participants' backgrounds ranged across geography, race, ethnicity, gender and school characteristics. In addition to interview data, secondary data consisted of participants' online policy writings, including blogs, microblogs (Tweets), videos, websites, policy reports written with teacher leadership organizations and other online media. For the purposes of this paper, public online writings illustrate the modes through which participants communicated about policy.

Each of the interviewees had participated in one or more national teacher leader- ship organizations over the course of their careers. For example, participants had been active in organizations such as the Center for Teaching Quality, the Teacher Leader- ship Initiative, the National Network of State Teachers of the Year, Teach Plus and VIVA Teachers. These and similar organizations¹ seek to involve classroom teachers in local, state and federal policy-making by providing forums for teachers to become leaders who speak and write about key policy issues. Most participants also were involved with the National Education Association (a labor union) and the National Board for Professional Teaching Standards (an organization that offers a voluntary certification process through which educators can demonstrate accomplished teaching). Compared to the broader teaching profession, participants' experiences were atypical in the sense that they served as classroom teachers while engaging in state and federal policy issues. Few classroom teachers have an opportunity to directly influence educational policy-making. Therefore, an analysis of how (1) teacher leaders are situated within broader educational (eco)systems and (2) they cross classroom boundaries called for more than what traditional policy methodologies could provide. Thus, data were diffracted through the application of philosophical theories.

Diffractive Analyses

To illustrate, diffractive readings respectively draw from the writings of political theorist, Jane Bennett and cultural theorist, Gloria Anzaldúa. Bennett (2010) uses vibrant political ecologies as a metaphor to describe the ways in which ecosystems function. Anzaldúa (1987, 2002) writes about B/borderlands to describe her own multiple and intersectional identities. Diffractive readings, which follow brief discussions of Bennett's and Anzaldúa work, begin with quotations from their writings. Quotations provide theoretical lenses through which data are read. That is, each quotation from Bennett or Anzaldúa is followed by an analysis of the data in relation to that particular passage. The process then repeats as quotations continue to be interspersed with analyses throughout this



section of the paper. The overall effect creates a series of diffractive readings that entangle and disentangle data through theory. By juxtaposing theoretical passages with data, the analysis facilitates understandings of diffraction as a specific theoretical procedure.

Bennett

Theories of democracy that assume a world of active subjects and passive objects begin to appear as thin descriptions at a time when the interactions between human, viral, animal, and technological bodies are becoming more and more intense. (Bennett, 2010, p. 108)

In *Vibrant Matter: A Political Ecology of Things* (2010), Bennett aims to 'highlight what is typically cast in the shadow: the material agency or effectivity of nonhuman or not-quite human things' (p. ix). She explores the intra-actions between human and nonhuman environments, and the ways in which each, in turn, affects the other. Bennett's writings are particularly useful in understanding the relationship between technology and society. In tandem with Barad, Bennett's writings allow researchers to identify and examine what is produced when elements within ecosystems and political systems intra-act.

Within the context of this critical policy analysis, Bennett's (2010) political ecologies offer a lens through which to theorize the political, organizational and technological aspects of teacher leadership. As these three elements intra-act to create new political ecosystems, they arguably take on a life of their own. In this sense, policy- based teacher leadership has become inseparable from politics, organizational structures and digital technologies. Bennett's writings thereby foster insight into how teacher leadership networks continue to expand in scope, strategy and number; how they exponentially generate policy texts; evolve; and continuously intra-act with multiple technologies. Although it would be easy to limit analysis to the individual level, to discuss organizations without individuals and individuals without organizations would be to overlook the dynamic interplay between the two. Helpfully, then, Bennett's ecosystems and political systems advance concepts through which to understand the entanglements of individuals, organizations, politics and technologies. Bennett thus provides a lens to examine the who and what of policy formation. On the other hand, Anzaldúa offers a lens through which to examine the movements therein.

Anzaldúa

Bridges are thresholds to other realities, archetypal, primal symbols of shifting consciousness. They are passageways, conduits, and connectors that connote transitioning, crossing borders, and changing perspectives. Bridges span liminal (threshold) spaces between worlds, spaces I call nepantla, a Nahuatl word meaning tierra entre medio. Transformations occur in this in- between space, an unstable, unpredictable, precarious, always-in-transition space lacking clear boundaries. (Anzaldúa, 2002, p. 1)

Anzaldúa is a cultural theorist who works at the intersection of race, class, gender, language and identity. She is known primarily for her concept of B/borderlands, which she writes about in *Borderlands/La Frontera: The New Mestiza* (1987) and in '(Un)natural Bridges, Unsafe Spaces' (2002). When written in lowercase form, borderlands refer to the Texas-Mexican border (Keating, 2009). When capitalized, Borderlands draw from, but move beyond, the geopolitical border into intersectional identities. 'These B/borderlands—in both their geographic and metaphoric meanings—represent intensely painful yet also potentially transformational spaces where opposites converge, conflict, and transform' (Keating, 2009, p. 319).

In addition to B/borderlands, two other concepts in Anzaldúa's writings are of interest in this study: nepantla and nepantleras. According to Anzaldúa, 'I use the word *nepantla* to theorize liminality and to talk about those who facilitate passages between worlds, whom I've named nepantleras. I associate nepantla with states of mind that question old ideas and beliefs, acquire new perspectives, change world-views, and shift from one world to another' (Anzalda, 2002, p. 1,

emphasis in original). Nepantleras, then, are those who cross liminal borders. Because the teacher leaders in this study regularly cross borders and boundaries as they lead beyond the classroom in policy arenas, Anzaldúa's writings provide a useful lens through which to theorize their professional movements.

Anzaldúa's writings are critical in nature, although they do not fall as neatly within new materialist concerns as do, for example, the writings of Barad and Bennett. What Anzaldúa's concept of B/borderlands adds, then, is a Chicana² strand of critical feminist theory to the study. First, the addition provides theoretical diversity. Second, because new materialisms often seek to decenter the role of the human within research, Anzaldúa's writings balance tensions between human and more-than human forces. By diffractively reading the same data-set through the theories of Bennett and Anzaldúa, different perspectives may be examined regarding participants' roles as individual actors vs. their roles as organizational members within a larger, discursive system. This is not to preference one theory over another, or to overemphasize or underemphasize the role of the individual, but to recognize the ways in which diverse critical theories—when read diffractively—can enhance data analysis through multiple perspectives.

Diffractive Reading 1: Bennett and Vibrant Political Ecologies

What is the difference between an ecosystem and a political system? Are they analogs? Two names for the same system at different scales? ... Are there nonhuman members of a public? What, in sum, are the implications of a (meta)physics of vibrant materiality for political theory? (Bennett, 2010, p. 94)

A 'vibrant materiality for political theory' demonstrates how the component parts of teacher leadership organizations work together within the larger educational political system. In many regards, the field of teacher leadership is analogous to an ecosystem: teacher leadership organizations exist within a larger political system; function as an interconnected community; operate within specific niches; produce and reproduce; share finite resources; and interact with other matter in the environment. Each of these elements is entangled with the others. To alter one element within the ecosystem is to alter the entire ecosystem.

To begin, teacher leadership organizations are housed within a larger system of education politics and policy. The US educational system is comprised local, state, and federal agencies, as well as policy-makers, legislators, think tanks and a plethora of other stakeholders. The educational system further possesses its own sets of policies, histories and agendas. This is the broader political space in which teacher leadership organizations seek to belong. Given the complexities of policy-making, it may not be enough for teachers and their organizations to desire a role in educational policy-making. Rather, to impact policy directly, teacher leaders might supplement desire with further knowledge regarding who influences policy, how policy is made and what policy histories exist. In short, the political contexts in play call for understandings of the policy-making process.

Teacher leadership organizations also operate within specific niches. The nature of a teacher leadership organization is determined by its ecological niche, which tends to exist in the form of associations, agencies and non-profit advocacy groups. Each niche caters to its own respective public, agenda and membership. Audiences may be related to labor associations, governmental agencies, networks of teachers or other advocacy organizations; the nature of the teacher leadership group, in part, determines the agenda. For example, federal policy fellowships address federal education pol- icy; the organization Teach Plus regularly focuses on teacher evaluation, turnaround schools and other priorities of their primary sponsor; and the VIVA Teachers group emphasizes grassroots strategies. From an outside perspective, teacher leadership organizations may appear to be similar, if not the same; a more nuanced perspective, however, reveals how each organization fills a unique need and niche.



Teacher leadership organizations function increasingly as an interconnected community. Although the organizations are distinctive in mission and composition, interrelationships among organizations are symbiotic. Each organization seeks to advance teacher leadership and increase teachers' role in policy formation. Several symbiotic partnerships within the teacher leadership ecosystem have emerged in recent years: the creation of the Teacher Leadership Competencies by the Center for Teaching Quality, the National Board for Professional Teaching Standards and the National Educational Association are some of the more recent and visible examples. The Teacher Leadership Initiative and joint partnership between the National Education Association and Teach Plus is another. All organizations began with their own respective institutional missions; yet, the same organizations are forming symbiotic relationships to achieve shared goals. In other words, though leadership organizations may vary in purpose, they are dependent upon one another for influence, ideas and membership. By collaboratively drawing stakeholders' attention to teacher leadership, organizations increase their potential to exert collective and individual influence. If policy-makers or prospective teacher leaders were to lose interest in teacher leadership, the organizations might not survive, much less thrive. Thus, teacher leadership organizations are ecological in the sense that they collaborate as a means of adapting to rapidly changing policy environments.

Teacher leadership organizations produce and reproduce. Individual teachers move across organizations that continue to divide and multiply, causing an ever-changing ecosystem to be cross-pollinated with ideas, strategies and expertise. Organizations then recruit and exchange new members, each of whom brings ideas and learnings from previous organizational experiences. In turn, organizational leaders collaborate amongst themselves. Thus, individual teachers and organizational leaders function as ideological pollinators. The exchange and expansion of ideas can be evidenced in a number of ways within the teacher leadership ecosystem, namely through the proliferation of digital publications and communications strategies, often on similar topics. Most organizations, for example, have tackled variations on career ladders for teacher leaders (Ulmer, 2013) within their online texts. Whether using policy white papers or Twitter chats, policy isomorphism spreads as organizations continue to replicate policy ideas and communications strategies.

Although teacher leadership organizations collaborate, they also compete for finite resources. As is the case within ecosystems, resources are finite, particularly with regard to the scarcity of funding. It is primarily this scarcity that leads to competition, even (and perhaps especially) among those with similar missions and visions. Acquiring finite fiscal resources also depends upon the amount of influence and, to a certain degree, the amount of prestige that organizations and their leaders maintain. Although influence cannot be measured as easily as funding, it remains an important commodity. Because influence stems from recognition, insiders suggest that some organizations jockey for credit in shared initiatives. In describing this phenomenon, one participant suggested that territorial disputes are not uncommon, and 'that is probably a big driver for why we haven't moved further within teacher leadership in education policy'. Outsiders, in contrast, might observe that some teacher leadership organizations seem to spend as much energy promoting themselves as much as the ideas that their teacher leaders produce.

Additionally, teacher leadership organizations interact with other matter in the environment, particularly technological matter that takes on its own agency. In this sense, the technologies that support the teacher leadership ecosystem function as nonhuman actants. Social and mass media platforms, for example, host digital writings that serve as actants. Digital writings catalyze change, spark discussion, invite collaborations and move policy. As matter, these digital writings possess vitality; words gain agency and become active policy matter. Human political actors act through and upon discursive policy expressions. Policy-makers, organizations and teacher leaders continue to respond. As individual and collective entities, organizations remain in vibrant motion. Part of this vibrant motion includes an ongoing formation of temporary alliances among teacher leadership organizations and individuals. Bennett would refer to these formations as 'publics'.

A public is a contingent and temporary formation existing alongside many other publics, protopublics, and residual or postpublics. Problems come and go, and so, too, do publics: at any given moment, many different publics are in the process of crystalizing and dissolving. (Bennett, 2010, p. 100)

Different publics emerge when external policy agendas serve as stimuli within the teacher leadership ecosystem, thereby causing organizations and members to coalesce around specific policy agendas. As policy agendas 'come and go', alliances may dis- solve. Or, they may evolve into something else entirely: an event, a report, a joint fellowship or an initiative. At any given time, there are a number of collaborations at different stages of progress. Some are just beginning ('protopublics'), some have been actualized ('publics') and others have left a lasting trace ('residual publics' and 'post- publics'). There are many publics within the teacher leadership ecosystem.

As Bennett continues, however, 'while every public may well be an ecosystem, not every ecosystem is democratic' (2010, p. 104). There are many questions related to democracy that the various protopublics, publics, residual publics and postpublics must navigate when they convene. For example, the drive toward elevating teacher voice raises questions of democracy. Whose voice? Who chooses? There are many potential candidates who might speak or choose who speaks: peers, associations, organizations, agencies, current teacher leaders, former teacher leaders, scholars, communities, students, families and policy-makers, among others. Moreover, when organizational agendas are involved, to what extent do teachers' voices carry? Some participants expressed the concern that some (though not all) organizations operate from the perspective that, 'we want your voice, but this is what we want you to say'. It is this concern that is driving the teacher leaders in this study to pursue more 'authentic', 'independent', and 'grassroots' approaches to leadership. As teacher leaders negotiate new roles for themselves in the classroom, in organizations and in policy arenas, they find themselves crossing many personal and professional B/borderlands.

Diffractive Reading 2: Anzaldúa and the Borderlands of Teacher Leadership

Borders are set up to define the places that are safe and unsafe, to distinguish us from them. A border is a dividing line, a narrow strip along a steep edge. A borderland is a vague and undetermined place created by the emotional residue of an unnatural boundary. It is in a constant state of transition. The prohibited and forbidden are its inhabitants ... (Anzaldúa, 1987, p. 3).

The phrase 'teacher leadership' itself straddles two borders: teaching and leading. As such, there are many dividing lines for teacher leaders, especially those involved in policy. The teacher leaders in this study operate within transitional borderlands—they are its 'prohibited and forbidden' inhabitants. In part, this is why they have met both challenge and success.

An emerging wave of teacher leaders begins by crossing the invisible borders of their schools and classrooms. They cross more borders on their paths through layers of local, state, regional, national and federal governance. This necessitates a willing- ness to move into what many perceive to be 'an unnatural boundary' of politics. The politics of education may impede more teacher leaders from becoming involved in policy-making, as political environments are unfamiliar, 'vague', and 'undetermined'. When teacher leaders engage with policy-makers, they tend to be ignored or welcomed. More often than not, it is the latter. Ironically, however, it may not be the policy arenas that warrant caution for many teacher leaders, but the navigation of subsequent relations with peers, administrators and organizations. Not everyone is supportive of teachers who lead across divisions.

Yet, '[w]here others say borders, these nepantleras saw links; where others saw abysses, they saw bridges spanning those abysses. For nepantleras, to bridge is an act of will...' (Anzaldúa, 2002, p. 4).

The question arises as to what, if any, borders teacher leaders recognize. Notably, the construction of the teacher leadership role itself is problematic. By creating a bridge between

teaching and leading, teacher leaders are challenging conventional boundaries regarding the role of the teacher. By leading within policy arenas, teachers are expanding their influence beyond the traditional boundaries of classroom walls; they are moving into new territories. This is because teacher leaders conceptualize their professional roles beyond conventional expectations or contractual obligations. As such, teacher leadership itself may be a transgressive act—it is an act that involves leading without authority.

Teacher leadership, then, crosses the borders of teaching into spaces for leading. This border crossing may create conflict between how teachers see their roles and how others see their roles (with others most often being administrators, association leaders, or teaching colleagues). Nearly all participants described crossing paths with another stakeholder who perceived their teacher leadership as a threat. As one participant explained, teacher leadership in policy arenas involves 'getting some bruises and the bumps and getting the occasional beat down'. For most, this led to the diminishment of professional relationships, particularly when administrators and union leaders on these subjects. Others, on rare occasions, faced being removed from their teacher leadership roles or from teaching altogether. Though the risks are significant and many participants acknowledged that 'there are places where this feels dangerous', they also viewed political involvement on the part of teachers as a necessary means of being involved in the profession. In short, the professional risks of involvement outweigh the risks of not being involved. These teacher leaders refused to abdicate responsibility of the profession to those outside the classroom.

The idealism with which participants initially created and enacted their roles was later tempered by an increased sense of realism. This shifting of perspective partially resulted from having crossed boundaries and inadvertently having created friction with other stakeholders. It also resulted from learning how slowly the wheels of policy turn. As one participant explained, 'You can't do it in one or two years. I probably naively thought we would have more impact faster when I started'. This was a learning shared by many participants. Yet, the teacher leaders in this study were not deterred by setbacks. Over time, they became more realistic about what types of challenges might exist, as well as how to proactively and reactively address those challenges through alliance-and relationship-building. For these teacher leaders, border crossing is an adaptive experience.

Contemporary teacher leaders have crossed many borders indeed, whether those borders involve time, occupational roles, professional expectations or other aspects of identity such as race or gender. Even so, teacher leaders see challenges as difficult opportunities rather than insurmountable barriers. They emphasize communication, collaboration and relationship-building in these endeavors, and they continue to build connections with individuals and stakeholder groups. Because they are willing to traverse unknown and potentially uncomfortable spaces, they are able to create links between, and bridges across, different sectors of education. Creating these links simultaneously is viewed as risky, exciting, promising and essential. Throughout, teachers' actions are propelled by a vision of teachers leading their own profession. In this sense, they follow Anzaldúa's observation that, 'Nothing happens in the 'real' world unless it first happens in the images in our heads' (1987, p. 87). A vision upon which to act, as Anzaldúa later writes, is what is necessary 'for positive social change to occur' (2002, p. 5).

By reading data diffractively through the writings of Anzaldúa and Bennett, perhaps a different composite of teacher leadership emerges. Like B/borderlands, diffraction troubles the dichotomies and binaries that so often follow teacher leadership (Barad, 2014). Moreover, like the fluid relations of vibrant political ecologies, diffraction provides a means of analyzing change and movement within political environments. This represents not only a move toward re-envisioned critique, but also an embrace of complexity in educational politics and policy. In essence, diffraction provides a means of identifying connections within vibrant, fluid and changing borders. As Barad observes, 'What often appears as separate entities (and separate sets of concerns) with sharp edges does not actually entail a relation of absolute exteriority at all' (Barad, 2003, p. 803).



Implications

The challenges of contemporary teacher leadership can be addressed through the theoretical figurations of Jane Bennett and Gloria Anzaldúa. They, as do many of their theoretical counterparts, offer theories through which to re-read data. Through Bennett (2010), vibrant political ecologies serve as a metaphor for the ecosystems of teacher leadership. Because individual teacher leaders work within and across different organizations, conceptualizing these collaborations and movements as political ecologies serves to highlight the cross-pollination of ideas and strategies. Through Anzaldúa (1987), the borderlands of teacher leadership provide a means of illustrating how teacher leaders bridge their roles within multiple layers of community, governance and identity. As a method of critical policy analysis, diffraction has the potential to create new methodological openings. This potential largely stems from the introduction of new theories and theorists into critical policy analysis. In addition, potential emerges from new materialist views of data as agential and productive and temporally disruptive. Consequently, educational policy analysis might be able to explore new fronts within teacher leadership, educational leadership and educational policy.

This is important, as Young observes, because there are 'the profound shifts taking place in contemporary social life' that call for new approaches to educational research 1999, p. 705). Many educational policy researchers agree (e.g. Ball, 1994; Lather, 2006; Marshall, 1997; Scheurich, 1994; Webb, 2014), and, increasingly critical policy scholars are leading this charge (Diem et al., 2014). By focusing on the ways in which diverse theoretical perspectives may address complex educational settings and policy environments, critical policy studies may produce broader perspectives regarding the ways in which differing stakeholders, groups, technologies and even theories collectively shape policy. Moreover, critical policy studies that adopt re-envisioned views of critique move toward research aimed at interconnection and understanding.

Diffraction adds to the methodological possibilities within critical qualitative policy analysis. Diffractive readings cause data to change 'when transiting from one theoretical and methodological arena to another. Depending on which questions we pose, what methodological strategies we use, and which theoretical fields we get involved in, we would see and understand this differently' (Palmer, 2011, p. 3). Furthermore, by attending to theoretical and methodological complexity, diffraction disrupts the linearity of knowledge production in research (St. Pierre, 1997). It is also a response to Lather's (2007) challenge for researchers to create new spaces in which to 'experiment differently with meanings, practices, and our own confounding' (p. 18–19). Notably, diffraction as a method of critical policy analysis adds to the most recent turn in policy scientificity by 'connect[ing] to a materialist orientation in in education and educational policy studies' (Webb & Gulson, 2015, p. 15; see also Ulmer, 2015a; Edwards & Fenwick, 2015).

Within this particular study, diffraction provided a means of re-reading data through theoretical methodologies. This process contributed an additional layer of analysis to the study. Participants raised a number of sensitive issues related to identity and power relations within their individual interviews. Given the specific nature of the data-set, without theoretical readings, such issues would have been difficult to dis- cuss while still maintaining participant confidentiality. An additional diffractive analysis thereby offered a means through which to address some of the most sensitive topics that emerged in the data within the context of the policy field at large. Importantly, the application of diffractive, theoretical readings provided a means of dis- cussing critical distance and discussion. Diffractive readings thus provided a means of discussing and analyzing data by 'cutting together apart' (Barad, 2014).

Significantly, diffraction represents a departure from traditional forms of policy analysis. As Webb writes, 'The idea that policy is unpredictable, chaotic, and contradictory strikes at the assumed rationality that directs its development and so-called implementation' (2014, p. 369). Because conventional policy models attempt to overlay simplicity upon complex systems, complexity often impedes the realization of intended policy targets. Though well-designed policy models convey a certain logical aesthetic, once policy leaves the page and enters the 'real world', the messiness



begins. Although policy language exists in relation to achievement gaps, opportunity gaps and implementation gaps, perhaps there are policy gaps, as well. Such gaps are not needs that are yet to be identified and addressed by policy, but rather are gaps within policy. In this regard, expanding policy analysis through critically theorized methods of diffraction might lead researchers, policy-makers and other stakeholders to understand the effects of policy differently. Understanding policy differently might ultimately lead to better policy.

Disclosure statement

No potential conflict of interest was reported by the author.

Notes

- Other organizations in the US which seek to involve teacher leaders in policy include the Hope Street Group National Teacher Fellowship; Leadership for Educational Equity Fellows; Leading Educators; New Millennium Initiative, Educators 4 Excellence; and Students First Teachers for Transformation. Several federal fellowship programs also provide teachers with similar opportunities to be involved in policy, including the Albert Einstein Distinguished Educator Fellowship Program and the Teaching Ambassador Fellowship program.
- 2. The term 'Chicana' refers to women who self-identify as Mexican-American. Chicana feminism situates itself within broader struggles for social justice and gender equality. Chicana feminist thought responds to sexist oppression while still affirming an ethnic consciousness (García, 1997).

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References

Anzaldúa, G. E. (1987). Borderlands/la frontera: The new mestiza. San Francisco, CA: Aunt Lute Books.

- Anzaldúa, G. E. (2002). (Un)natural bridges, (un)safe spaces. In G. E. Anzaldúa & A. Keating (Eds.), *This bridge we call home: Radical visions for transformation* (pp. 1–5). New York, NY: Routledge.
- Ball, S. J. (1994). *Education reform: A critical and post-structural approach*. Philadelphia, PA: Open University Press.
- Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs, 28*, 801–831.
- Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning.* Durham, NC: Duke University Press Books.
- Barad, K. (2014). Diffracting diffraction: Cutting together-apart. *Parallax, 20*, 168–187.
- Bennett, J. (2010). Vibrant matter: A political ecology of things. Durham, NC: Duke University Press.
- Bodén, L. (2015). The presence of school absenteeism: Exploring methodologies for researching the materialdiscursive practice of school absence registration. *Cultural Studies* <=> *Critical Methodologies*, *15*, 192– 202.
- Davies, B. (2014). Reading anger in early childhood intra-actions: A diffractive analysis. *Qualitative Inquiry, 20*, 734–741.



- Diem, S., & Young, M. D. (2015). Considering critical turns in research on educational leader- ship and policy. International Journal of Educational Management, 29, 838–850.
- Diem, S., Young, M. D., Welton, A. D., Mansfield, K. C., & Lee, P. L. (2014). The intellectual landscape of critical policy analysis. *International Journal of Qualitative Studies in Edu- cation, 27*, 1068–1090.
- Edwards, R., & Fenwick, T. (2015). Critique and politics: A sociomaterialist intervention. *Educational Philosophy and Theory*, *47*, 1385–1404.
- Eppley, K. (2009). Rural schools and the highly qualified teacher provision of no child left behind: A critical policy analysis. *Journal of Research in Rural Education*, 24(4), 1–11.
- García, A. M. (1997). Introduction. In A. M. García (Ed.), *Chicana feminist thought: The basic historical writings* (pp. 1–18). New York, NY: Routledge.
- Haraway, D. (1992). The promises of monsters: A regenerative politics for inappropriate/d others. In L. Grossberg, C. Nelson, & P. A. Treichler (Eds.), *Cultural Studies* (pp. 295–337). New York, NY: Routledge.
- Haraway, D. (1997). Modest-witness@second-millennium. Femaleman[Copyright]-meets-oncomouse [Trademark]: Feminism and technoscience. New York, NY: Routledge.
- Jackson, A. Y., & Mazzei, L. A. (2012). Thinking with theory in qualitative research: Viewing data across multiple perspectives. New York, NY: Routledge.
- Kaiser, B. M., & Thiele, K. (2014). Diffraction: Onto-epistemology, quantum physics and the critical humanities. *Parallax, 20*, 165–167.
- Keating, A. (Ed.). (2009). The Gloria Anzaldúa reader. Durham, NC: Duke University Press.
- Lanas, M., Rautio, P., Koskela, A., Kinnunen, S., Viljamaa, E., & Juutinen, J. (2015). Engaging with theoretical diffraction in teacher education. *Discourse: Studies in the Cultural Politics of Education*, ahead-of-print, 1–12.
- Lather, P. (2006). Foucauldian scientificity: Rethinking the nexus of qualitative research and educational policy analysis. *International Journal of Qualitative Studies in Education, 19*, 783–791.
- Lather, P. (2007). *Getting lost: Feminist efforts toward a double(d) science*. Albany, NY: State University of New York Press.
- Lenz Taguchi, H. (2012). A diffractive and Deleuzian approach to analysing interview data. *Feminist Theory*, 13, 265–281.
- Lenz Taguchi, H., & Palmer, A. (2013). A more 'livable' school? A diffractive analysis of the performative enactments of girls' ill-/well-being with(in) school environments. *Gender & Education*, 25, 671–687.
- Marshall, C. (Ed.). (1997). Feminist critical policy analysis: A perspective from primary and secondary schooling. Bristol, PA: Taylor & Francis.
- Palmer, A. (2011). 'How many sums can I do?' Performative strategies and diffractive thinking as methodological tools for rethinking mathematical subjectivity. *Reconceptualizing. Educational Research Methodology*, 1, 3–18.
- Phillips, D. K., & Larson, M. L. (2012). The teacher student writing conference entangled thinking data with material feminisms. *Cultural Studies* ← → *Critical Methodologies*, *12*, 225–234.
- St. Pierre, E. A. (1997). Methodology in the fold and the irruption of transgressive data. *International Journal of Qualitative Studies in Education*, *10*, 175–189.
- Scheurich, J. J. (1994). Policy archaeology: A new policy studies methodology. *Journal of Education Policy*, *9*, 297–316.
- Taylor, S. (1997). Critical policy analysis: Exploring contexts, texts, and consequences. *Discourse: Studies in the Cultural Politics of Education, 18*, 23–35.
- Ulmer, J. (2013). Formalizing differentiated teacher leadership roles: A review of selected literature. Paper presented at the University Council for Educational Administration, Indianapolis, IN.
- Ulmer, J. (2015a). Plasticity: A new materialist approach to policy and methodology. *Educational Philosophy and Theory*, *47*, 1096–1109.
- Ulmer, J. (2015b). *Teacher leadership in the digital age: A critical policy analysis (Unpublished doctoral dissertation)*. Gainesville, FL: University of Florida.
- Webb, P. T. (2014). Policy problematization. *International Journal of Qualitative Studies in Education*, 27, 364–376.
- Webb, P. T., & Gulson, K. N. (2015). Policy, geophilosophy and education. Rotterdam, Netherlands: Sense.
- Young, M. D. (1999). Multifocal educational policy research: Toward a method for enhancing traditional educational policy studies. *American Educational Research Journal, 36*, 677–714.
- Young, M. D., & Diem, S. (2014). Putting critical theoretical perspectives to work in educational policy. International Journal of Qualitative Studies in Education, 27, 1063–1067.