



Maria de Baratta's *Nahualismo* Revisited: Quantum Identity Politics, Crises, and Reconfigurations

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Abstract

While attention to the provocative composer Maria de Baratta has increased in the past few years, mysteries about her past remain. Solutions inferred from available data remain uncertain. However, uncertainty itself, and the attendant multiple possibilities, are academically and scientifically supported by quantum theory, postcolonial and new materialist feminisms, ritual technologies like those depicted in de Baratta's ballet *Nahualismo*, and known practices of some of the most vaunted artists of our time. Together, these disciplines bring understanding of Maria de Baratta and her ballet into a more multi-dimensional, thus more complete perspective. Paradoxes and quirks in her expressions of the indigenous culture of El Salvador (of which she was a descendant) emerge more as strategic preservation than appropriation.

Keywords: quantum, ritual, ballet, new materialism, Chicana feminism, nahualism, El Salvador, Cuzcatlán, gender studies, indigenous studies, indigenismo, nationalism, performativity, Karlton Hester, Maria de Baratta, Demi Lovato, Gloria Anzaldúa, Chela Sandoval

Resumen

Si bien la atención la provocativa compositora Maria de Baratta ha aumentado en los últimos años, siguen existiendo misterios sobre su pasado. Las posibles soluciones inferidas de los datos disponibles siguen siendo inciertas. Sin embargo, la incertidumbre en sí misma, y las múltiples posibilidades que la acompañan, están respaldadas académicamente y científicamente por la física cuántica, los feminismos materialistas poscoloniales y nuevos, las tecnologías rituales como las representadas en el ballet *Nahualismo* de De Baratta y las prácticas conocidas de algunos de los artistas más aclamados de nuestro país. Juntas, estas disciplinas llevan la comprensión de María de Baratta y su ballet a una perspectiva más holográfica así completo. Las paradojas y peculiaridades en sus expresiones de la cultura indígena de El Salvador (de la que era descendiente) emergen más como preservación estratégica que como apropiación.

Palabras claves: cuántica, ritual, ballet, nuevo materialismo, feminismo chicano, nahualismo, El Salvador, Cuzcatlán, estudios de género, estudios indígenas, performatividad, indigenismo, nacionalismo, Karlton Hester, Maria de Baratta, Demi Lovato, Gloria Anzaldúa, Chela Sandoval

...But nobody wants to be the Indian. Unfortunately in our country, “to be indigenous” is not a reason for pride, rather for embarrassment; the word is used pejoratively to designate ignorance, lack of culture or even belonging to an inferior race.

This perception comes since 1932, when General Maximiliano Hernández Martínez led a massacre of indigenous people (“La Matanza” killed tens of thousands) that became the greatest known genocide in Central America.

The massacre caused the indigenous population of the country to deny their heritage for fear that they would be killed, creating a perception that to be indigenous was bad... Most of us have indigenous blood in our veins, but it bothers us if they call us Indians.... (Xbal, 2018, Location 170, translation mine).

(Observing) “separate academic divisions,” whereby the division of labor is such that the natural sciences are assigned matters of fact and the humanities matters of concern... It is difficult to see the diffraction patterns—the patterns of difference that make a difference—when the cordoning off of concerns into separate domains ... In chapter 2 of *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Barad 2007) I discussed in detail what I call a diffractive methodology, a method of diffractively reading insights through one another, building new insights, and attentively and carefully reading for differences that matter in their fine details, together with the recognition that there intrinsic to this analysis is an ethics that is not predicated on externality but rather entanglement. Diffractive readings bring inventive provocations; they are good to think with.¹

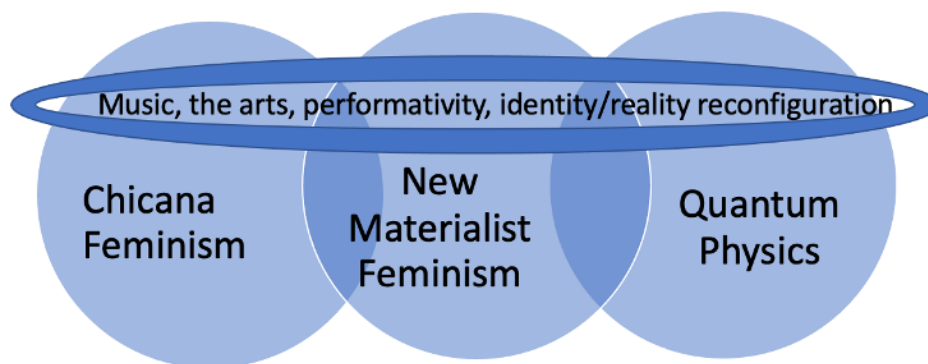
The first passage above, from *El Gran Secreto Pipil*, about the indigenous Pipil, recalls the tragic identity politics made material during Maria de Baratta’s time in El Salvador. As versions of such atrocities continue worldwide, this re-visitation of *Nahualismo*, de Baratta’s mid-1930’s ballet about indigenous identity, finds the work remains relevant, even powerful, today. The ballet’s structure, which incorporates numerous musical dualities, infers the multiple paradoxes in the composer’s own identity configuration—traditional gender roles as a wife and mother in her place and time versus her many professional projects; her indigenous Lenca grandfather versus her Western upbringing; working for the government yet protesting it. The ballet suggests the coexistence of plural cultures, and the synthesis of plural identities, through its ritual plot and compositional procedures, as will be traced.

Theory from Chicana (Sandoval, Anzaldúa, etc.) and new materialist (Barad, Coleman, etc.) feminists, works of post-colonial artists (Hester, Gonzalez, etc.), and findings of quantum scholars (Vaccaro, Heisenberg, etc.) elucidate how performativity, ritual and the arts aid in surfing paradoxes like those *Nahualismo* and its composer engaged. The second quote above is by Karen Barad, a founder of new materialist feminism; she advocates for trans-disciplinary research to produce breakthroughs in multivariate endeavors, foregrounding quantum theory and performativity. In revisiting *Nahualismo* from the perspective of diverse disciplines, new insights which Barad calls “diffractions” emerge. Thus paradoxical dualities in the piece and in de Baratta’s life find apt

¹ Barad, in *New Materialism: Interviews & Cartographies* by Rick Dolphijn and Iris van der Tuin <https://quod.lib.umich.edu/o/ohp/11515701.0001.001/1:4.3/-new-materialism-interviews-cartographies?rgn=div2;view=fulltext>, accessed Aug. 15, 2021.

metaphors in quantum physics’ superpositioning building blocks of matter as both waves and particles. Performative strategies advocated by new materialist feminists could have empowered the composer to endure identity politics, survive identity crises, and, arguably, reconfigure an identity encompassing the paradoxes. These become more apparent in *Nahualismo*.

The introduction of so many perspectives may seem forebodingly abstruse or risky. “Transgressing disciplinary boundaries... (is) a subversive undertaking since it is likely to violate the sanctuaries of accepted ways of perceiving. Among the most fortified boundaries have been those between the natural sciences and the humanities” according to Valerie Greenberg in *Transgressive Readings* (as quoted by Alan D. Sokal in *Trangressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity*, 1996, p. 217). References to quantum physics herein can be seen as metaphorical by those not convinced of their applicability, hopefully assuaging concerns about scholarly procedure. Lest the disciplines seem freely blended to a quantum degree, rest assured they are, as illustrated in this graphic of their inter-referentiality herein.



How, then, will the article proceed?

- The following section presents a brief background on the composer and *Nahualismo*.
- The next section discusses recent artists who have engaged issues or strategies, then explores supporting theory by Chicana feminists, new materialist feminists and quantum physicists. These sources advocate for plural interpretations, even of the past.
- The penultimate section revisits *Nahualismo* itself, proposing how the piece informed and was informed by de Baratta’s identity processes in terms of the theory just covered.

Background of Composer

Even ten years ago, Ms. de Baratta (1890–1978) was far less-known than she is today. As musicology evolves toward more inclusivity, Ms. de Baratta’s multiple marginalities have within only the past few years yielded entries in Wikipedia and other databases. Her name is now on projects such as Fomilenio II’s María Mendoza de Baratta Education Complex in Sonsonate, El Salvador, which opened this past December, and the Orquesta María de Baratta of San Salvador.

As musicology becomes more inclusive as to whom it embraces, so should it become more inclusive of possible interpretations of the work of artists like de Baratta. In her ballet *Nahualismo*, she explores numerous dualities traced in my 2018 article: contrasts between indigenous Nahualism beliefs and Christianity, between holiness and the devil, between the West and indigenous culture. Dualities in de Baratta's life contrasted the influences of her indigenous ancestry with her Western upbringing. They caused moral conflicts with the hegemonic politics of El Salvador. Gender expectations did not always welcome de Baratta's multiple identities as prize-winning composer, ethnographer, wife, mother, concert pianist, activist.

Many of the composer's compositions involved themes based on indigenous folk traditions of *Cuzcatlán*, the indigenous name for El Salvador, which she preferred. Even the title and plot of *Nahualismo*, dated less than five years after *La Matanza*, refer to indigenous beliefs that include the doubling of an individual, from birth, by a *nahual* (animal or spirit guide.)

More dualities in de Baratta's life and work apply. While her economic status and education imparted privilege, she protested bodily after *La Matanza*, resulting in incarceration. She publicly sided with authorities in some cultural matters, while some private choices seemed contradictory. This took print form in the composer's monumental ethnography *Cuzcatlán Típico: Ensayo Sobre Etnofonía de El Salvador, Folklore, Folkwisa y Folkway*. She explained in the preface that she preferred the Nahuatl "Cuzcatlán" over "El Salvador" and included the first lexicons of several endangered indigenous languages. Yet, in the same volume, she dismissed Nahualist beliefs as "absurd" (de Baratta, 1952.)

Why did de Baratta dismiss Nahualism if she was a direct descendant of the last Lenca chief of *Cuzcatlán* (Slonimsky, 1972) and if sang the indigenous cultures' praises in other areas? Was dissimulation involved, or some other form of doubling? Perhaps there was

... a Kantian... acceding in public life to consensus values while nurturing individual views in private... the mystery... involve(s) treatment... of ancient belief systems that have survived, to the limited extent they have, by the very tactic of public acquiescence and dissimulation doubled up with continued practice in private (Sacolick, 2018).

Such dualities, such doublings, may be paradoxical; but quantum physicist Neils Bohr once rhapsodized, "How wonderful that we have met with a paradox. Now we have some hope of making progress" (quoted in Moore, 1966, p. 196).

Nahualismo, the ballet, is fraught with musical dualities and doublings. The plot traces a Nahualist ritual similar to one recounted by de Baratta in *Cuzcatlán Típico* which involved a relatively Western participant seeking a cure from a Nahualist shaman, through a set of procedures including chant, prayer, repetition, copal (Mesoamerican incense), etc. Similarly, *Nahualismo's* music juxtaposes themes utilizing Western instruments, scales, and rhythms with themes that use indigenous instruments, blatant bare tritones (the "devil's (double's) interval" in Western theory), ostinati and improvisatory rhythms (illustrated in my 2018 article.) Intensity increases to a cathartic moment when the cure (an exorcism) is realized and the two theme types are superposed, heard

together. The audience witnesses the tritonic “unholiness” of Nahualistic procedures alongside their efficacy. Procedures prohibited in the West produce a cure, thus a paradox— and progress. While de Baratta was writing *Nahualismo*, nationalism was fashionable, and the government took credit for some of her work. One of her closest colleagues was Jesús Castillo, Guatemalan composer and ethnomusicologist. Carlos Chávez was a leading exponent of Mexico’s project to promote a unified national identity through a symbolic Aztec imaginary (Hutchinson, 2009). Luis Delgadillo of Nicaragua and Jesús Castillo’s half-brother Ricardo were others among her contemporaries. “*Indigenismo*” became interchangeable with “*nationalismo*” in their music (Béhague, 2006). So de Baratta was not necessarily protesting the government’s treatment of the indigenous by foregrounding their beliefs in music. *Indigenismo* might now even resemble cultural appropriation, serving up to the Westernized elite panoramas of ancient, sacred traditions in secular concert halls. That constitutes another paradox with composers’ professed esteem for these traditions.

Such dualities—familial, religious, political, artistic—could have thrust any exponent of the late twentieth century into identity crisis, any inhabitant of the early 21st century into identity reconfiguration, or any witness of the 2020’s into identity politics. The following analysis of *Nahualismo* shows it might have served, consciously or not, as a crucible for resolving identity dualities. To contextualize the analysis, the theory section precedes it here, likening the crucible to a ritual borderland or a quantum plasma that is able to produce identity transformation.

Artists, Feminists and Quantum Physicists in Identity Resolution

Of course, many artists evolve their identities and ideologies to meet changing conditions, as Maria de Baratta must have done. This confounds biographers who would prefer fixed narratives, but frees those who welcome the multiple interpretations encouraged by post-modern thought, technology, psychology, and quantum science. Countless artists have interpreted their pluralities and transformations. One who is particularly relevant to de Baratta’s *Nahualismo* is Dr. Karlton Hester, composer and head of the Digital Arts department at University of California, Santa Cruz. His works employ instruments from around the world; film, live dancers and poets; serialism and improvisation; and layered sonic passages blending classical, “jazz,” Korean, griot, and hip hop expressions. For audiences, the experience may defy analysis. That is likely part of what Hester intends—to involve participants in a ritual process of expanding identities and awareness through engaging the unexpected and ineffable. For example, his *Quantum Elders Hip Hop Ballet* of 2019 disregards decrepit notions of the concert hall, rendering it anew as a ritual space. The work deploys a sensory technique that Hester calls “sustained intensity,” through which people in various cultures have undertaken ritual activities to embody deities, to receive cures, to re-invent themselves and their worlds. This approach contextualizes *Nahualismo* as another work that describes and achieves transformation through juxtaposing multiple belief systems and musical styles. Similarly, scholars like Victor Turner model ritual as a crucible invoking sustained, intense activities to separate people from comfort zones, loosen identity strictures, and open spaces in which to reconfigure.

Gloria Anzaldúa, in her 1987 *Borderlands/La Frontera*, discussed the crucible liminal spaces of external and internal borders, which enable her contrasting identities to intra-act.

...all these worlds overlap: this is your race, your sexual orientation... here an academic, here an artist, there a blue-collar worker. Where these spaces overlap is *nepantla*, the Borderlands. Identity is process-in-the-making... so you shift, cross the border from one to the other..." (Anzaldúa qtd. in Keating, 2000).

When asked "What's real?" Anzaldúa answered, "It all is!" (Keating 2000). She resuscitated ancient archetypes as empowering guides in a "third space" where contradictory expectations coexist and are transcended, and

*... in which those who are not recognized within the "legitimate" constructions of subjectivity—culture, nation, race, sexuality—resist immobilization and ... instead ... **redefine the very limits of subjectivity as they negotiate the discursive traffic (in) the "crossroads" of consciousness... sustaining contradictions and residing in the various and liminal ontological, epistemological, and geographical zones ... of... "the borderlands"*** (Contreras 2008, emphases mine).

The borderlands is a compelling metaphor for dysfunctionality that capitalist society sets into motion yet disowns. The third space provides a site for new identities to fuse or synthesize, where the capitalist realm is a mere shadow. It is a crucible for all manner of identity formation—ethnic, spiritual, gender, etc...

Anzaldúa invokes the help of archetypal guides like indigenous deities, the Virgin of Guadalupe, and her *nahual*. This concept of indigenous Mesoamerica involves the individual being empowered by their *nahual* which is akin to a double, a spirit guide, or a magical animal self. Similarly, Dr. Hester's *Quantum Elders Hip Hop Ballet* opens with a repeated invocation: "Listen to your quantum elders, they have always been your conscious helpers," which recalls the importance of ancestral helpers in many cultures. Words are not a medium in *Nahualismo*, but ritual intensity, dance and music are.

Ritual, art, and guides have been useful worldwide to combat oppression. Sonia Saldívar's 1990 *Feminism on the Border* examined "places (such as the arts) not usually recognized as sites of 'theory' by (those) in charge of the modes of cultural production" for handling capital's demands and "internal contradictions within her own, often sexist and homophobic culture."

Hegemony has so constructed the idea of method and theory that often we cannot recognize anything is different from what the dominant discourse constructs... we have to look in non-traditional places. (Saldívar, 1990).

Nahualismo, an art piece that represents ritual, could have provided a space for identity reconfiguration, in the audience and compositional process as well as onstage. Whereas Chicana feminism and post-modern plurality were not recognized methodologies in the 1930's, rituals and arts had filled this role for millennia. Chicana feminist Chela Sandoval also suggests artistic means for reconfiguring identity:

Differential consciousness is linked to whatever is not expressible through words. It is accessed through poetic modes of expression: gestures, music, images, sounds, words that plummet or rise through signification to find some void... yet it functions outside speech, outside academic criticism, in spite of all attempts to pursue and identify its place of origin... This... is designed in a multiplicity of forms, from revolt to religious

experience, from *rasquache* to punk... it is a conduit brought about by any system of signification capable of evoking and puncturing through to another site... of differential consciousness (Sandoval, 1993, emphases mine).

In seeking non-hegemonic tactics, she also offers love:

To fall in love means that one must submit, however temporarily, to... a state of being not subject to control or governance. It is at this point that the drifting being is able to pass into... the abyss (where) subjectivity can become freed from *ideology as it binds and ties reality*... (Sandoval, 1993, emphases mine).

This recalls the liminal third state of ritual where people relinquish that which no longer serves in order to transcend paradoxes and access more whole identities.

Emma Pérez argues “that the differential mode of consciousness to which Sandoval refers is precisely third space feminist practice, and that practice can occur only within the decolonial imaginary... a political project for *reconstructing histories*” (Pérez, 1999, p.4, emphases mine). She suggests the arts and performativity:

For us today, the lines between the real and the imaginary are blurred. Many of us try with our passions to reconstruct the epics, dramas, comedies and tragedies in a narrative that will echo “truth” (Pérez, 1999.)

This recalls *Nahualismo*. Such performative strategies also figure in new materialist feminism. This turn, too, promotes reconfiguration through performativity, but based in quantum science. It posits time as non-linear and inventive, theory as immanent and creative.

... immanent thinking is important to the disruption of time as the progression from past to present to future... This idea that time is non-linear and multidirectional—relational rather than causal—is important for understanding ... a phenomenon in which both nature and culture have reciprocal effects... (and) for understanding images of transformation in two ways. First... future as potential is brought into the present... as the need to change and transform now. In this sense, *images of transformation* can be understood as working through an intensive or immanent time, where time does not (only) move from the present to the future, but *where the future is experienced in and as the present* (Coleman, 2014, emphases mine).

Coleman here advocates abandoning notions of linear time to enable feminist objectives to be realized immanently rather than in a hoped-for future. Her images of transformation are to be manifested as performative ways of intervening in perceived reality both now and in the future. Rachel Loewen Walker (2014) brings further quantum perspective to the dynamic power of performativity:

By collapsing the binary between the real and representational, ‘life itself’ becomes the *affective capacity of matter*, where ‘life’ is *neither actual nor virtual, but instead a spatio-temporal relationality that constitutes singularities and meaning through the dynamism of an intra-active becoming*... Individual entities—matter, human, non-human, discourse, nature and culture—then, only find meaning or expression through their co-creative connections and entanglements with other entities... (Loewen Walker, 2014, emphases mine).

She foreshadows the upcoming discussion of quantum theory, using terms like “intra-activity,” “affective capacity of matter,” “entanglement,” and “spatio-temporal relationality” in the same ways as scientists describe behavior of quantum items. For example, physicist Richard Feynman said “You can't say A is made of B or vice versa. All mass is interaction” (quoted in Gleick, 1992, p. 5).

De Baratta may have had some sort of intra-activity in mind as she wrote *Nahualismo* about indigenous ritual to be performed on national stages just a few years after *La Matanza*. Regardless, she created art about what moved her, in an important time and place to do so, although her gender and location reduced broader attention to her work at the time (Sacolick 2018).

Quantum physics findings support notions that ritual, performativity and the arts might redefine reality. They provide evidence of multiple simultaneous realities; of quantumly “entangled” items located at great distance from each other undergoing related changes when only one of them is stimulated; of causing the past to change; and of situations wherein disparate elements become fused and identical. Complete expositions of these findings are beyond the scope here, but some are outlined and more information is readily accessible elsewhere (see bibliography).

A quantum item may exist at once as particle, wave, or a superposition of both: multiple states of reality. While perplexing, this is practical. Quantum computers such as those made by IBM use quantum items to process calculations. Because they function simultaneously as three different states, they are exponentially faster than conventional chip computers.

Still, quantum physicists sometimes resort to faith over positivism, metaphor over logic, to explain their work. Nobel-prize-winning physicist Werner Heisenberg, credited with inventing quantum mechanics, stated, “Quantum theory provides us with a striking illustration of the fact that we can fully understand a connection though we can only speak of it in images and parables” (Heisenberg, 1971). Thus, the ineffable intersects with science.

To describe multiple quantum states, physicist Erwin Schrödinger described a box containing a cat and a device that could kill the cat. With a 50% probability of the device activating, the box must be opened to ascertain the cat’s status. If the cat was a quantum item, it would be simultaneously alive and dead (particle and wave) until the box is opened. Physicists call this dual state “superposition.” The ultimate status of Schrödinger’s cat *results* from opening the box. This amounts to retro-causation. Philip Ball wrote in the May 21, 2018 *Scientific American*:

The very act of measurement seems to “collapse” the superposition. “We know something fishy is going on in a superposition,” says physicist Avshalom Elitzur of the Israeli Institute for Advanced Research. “But you’re not allowed to measure it. This is what makes quantum mechanics so diabolical.”

The subtitle of *Nahualismo* is *Diabolus in Musica*, devil in music. The term “devil” comes from the root for “double,” as in a *nahual*, as in the dual types of themes and worldviews treated in the piece, as in the status of the cat before the box is opened.

In the December 15, 2020 *Scientific American*, John Horgan tackles the tricky business of linking the noetic to the scientific, and mental intentions to physical reality.

...How does matter make a mind? This is the mind-body problem...When we wrestle with quantum mechanics, we're also taking on the mind-body problem. Quantum paradoxes like Schrödinger's cat and the measurement problem raise questions about the connection between matter and mind, and their status relative to each other. Is matter self-sufficient, as materialists insist, or does reality require mind too? (Horgan, 2020).

By this logic, new materialist feminists should believe that matter is not influenced by mind. Perhaps the "new" is what imbues this turn with quantum possibility that mind, or that which mind sets in motion, does intra-act with matter. Further support comes in the work of quantum physicist Joan Vaccaro (2016). Noticing that traditional science ignores asymmetry in time, while expecting symmetry in other dimensions, she posits that time could travel in two directions if the asymmetry was eliminated. She implies that humans may be complicit in accepting time as asymmetrical so as to reify our worldview of dramatic narrative through time. If we drop this worldview and eliminate the as

...A new kind of pluralism will reemerge (emphases mine)...we must first lay to rest a common misconception that the arrows of time are melded in some way into the concept of time itself. In particular, if the only thing that distinguishes the two directions of time is an increase of entropy in one direction, then perhaps one could be forgiven for ... regarding the entropy increase as somehow causing the direction of time. But, in truth, the arrows (such as increasing entropy) are only evidence that time has a direction and there is simply no basis for claiming them as the cause of that direction ... Having laid bare the evidential nature of the arrows, we now examine the thermodynamic arrow in particular. This... is phenomenological in origin. It arises because thermodynamics was developed to be in accord with nature and thus it was intentionally structured to have an increasing entropy in the direction of time we refer to as "forwards" (Vaccaro, 2016).

Vaccaro attributes physicists with using the creative power of their minds along with their observations, to define time. Heisenberg agreed: "Of course, we all know that our own reality depends on the structure of our consciousness; we can objectify no more than a small part of our world" (as quoted in John & Dunne, 2012, p. 175). This aligns with new materialist feminism's creative, intensive, immanent time, as plied during ritual or artistic performativity. Vaccaro elaborates:

To claim that the thermodynamic arrow... explains the direction of time, is to commit ... a double standard fallacy... Its resolution calls for a time-symmetric model of nature that accounts for both directions of time ... To address this situation, we undertake... **To treat time and space on an equal footing at a fundamental level, and to allow their familiar differences to emerge phenomenologically from the discrete symmetry violations. If the violations deliver the differences between space and time then we will have found a theory that ... gives rise to the familiar direction of time. The anomaly would then be resolved as a natural consequence of the goal...** With these ... three principles on which to base the development of the new formalism: Principle 1. A quantum state is represented as a **superposition of paths, each containing many reversals**. We call these "quantum virtual paths". Principle 2 ... Quantum virtual paths with step sizes smaller than (a lower) limit have an equal physical status. Principle 3. States have the same construction in both time and space. Any differences between space and time... emerge phenomenologically as a result of the violation of discrete symmetries (Vaccaro, 2016, emphases mine).

Vaccaro solves perceived differences between space and time by acknowledging the mind's role in interpreting these dimensions. Thus she reverses prior materialist ideas of reality. The artists

and theorists discussed herein attempt this too--whether the reality to be reversed is colonialism, belief that indigenous practices are diabolical, or notions that music represent a genre.

Arseny Zhilyaev and Anton Vidokle (2018) are artists who, using Vaccaro's theory, self-identify as "from an (imaginary) future" and simplify her theory:

According to (Vaccaro's) research, "... a violation of time reversal (T) symmetry, is forcing the universe and us in it, into the future."... A universe without this violation should be symmetrical in space and time... In such a world, time can be used in the same manner as space... If you impose this model on art history, **you will get a radical independence of each new art form without narrative** (emphases mine)... If a scientist does this, why do we as artists limit our imaginary to the known world of art?

Vaccaro's work evokes time as seen by El Salvador's Pipil:

We ourselves turn united with the universe. To this body of the universe, the Milky Way belongs. Through this we see ourselves, that move in a circle... The Indian imagines a function of the universe in which earth forms a part in the phase of universal rotation. The moon (Metsti) and the sun (Tunal) are two brothers that go fighting permanently... The vague and voluble character of the moon irritates the Sun ... For the Pipil, the moon and the sun were of equal value, their great concern was to maintain the equilibrium of forces among the two... (Xbal 2018, Location 170, translation mine).

Thus, the Pipil, with whom de Baratta participated in traditions, have long known about superposition, in the moon and Sun permanently fighting to produce equilibrium (recalling musical physicist Pythagoras' music of the spheres keeping everything suspended in space). The new materialists agree

... that time is non-linear and multidirectional... is important for understanding ... a phenomenon in which both nature and culture have reciprocal effects...(and) for understanding images of transformation...(Coleman, 2014).

Art's power to impact reality across time barriers takes support from quantum and non-Western theory, and is exalted by artists like Hester and Vidokle/Zhilyaev. Pluralities in *Nahualismo* present the listener with more than one aesthetic--a Mesoamerican indigenous amalgam, and the Western nationalist trope. De Baratta superposes these just as a Schrodinger superposes dual cat realities before reducing them to one by measuring them. She catalyzes a strategic synthesis of her voice in the musical/ritual crucible, using the performative imaginary to amalgamate both Westerner and indigenous, homemaker and professional, as is now traced.

***Nahualismo* Revisited: Quantum Identity**

Today's identity politics exacerbate pluralism. Social media influencers who struggle to avoid tone-deafness may lose authenticity. They may avoid offending, but be received as disingenuous. Someone from a marginalized group may need, for personal safety, alternately to attract attention and to avoid it, thereby forfeiting their most authentic voice. What does this have to do with Maria de Baratta and *Nahualismo*?

Early in my research, a professor asked me why the composer wasn't referred to including her maiden surname, Mendoza, as well as de Baratta. Identity politics may bear on this. Ms. de Baratta may have been ambivalent about her representation. In El Salvador during her time, many distanced themselves from indigenous heritage, as described in Xbal (2018) and Virginia Tilley's 2005 *Seeing Indians*. Perhaps her husband preferred the Italian usage. Perhaps Ms. De Baratta dropped her birth surname as an exchange within her marriage for the freedom to pursue her professional activities. Another interpretation could be that Ms. Mendoza's birth family preferred her to distance herself. This could have been the case for political reasons within El Salvador, or because her professional activities represented a break from traditional gender roles, or because they involved increasing interactions within indigenous Mesoamerican cultures and beliefs. It could have been because she drew attention to the indigenous blood they shared.

None of these may be correct. Still, the fact that many factors *could* have contributed is a rich, educational narrative, which Zhilyaev and Vidokle would appreciate. It prevents over-essentializing history. Consistent with quantum physics, new feminisms, and common sense, multiple narratives may indeed apply.

Potential pluralities, as wrestled by Anzaldúa, Vaccaro, Hester, etc., impact *Nahualismo* as well. Musical binaries in the piece suggest the contradictions in the composer's writing about Nahualism:

Not surprisingly for a ballet, some of the sections take a traditional binary or rounded binary dance form. Two other types of binary emerge as more unique... the prominent gesture at the midpoint where abrupt changes in meter and key cut the work into halves. ... An interpretation consistent with the midpoint of the anecdote (about a Nahualist exorcism ritual) in *Cuzcatlán Típico* (de Baratta's master ethnography) is that here, the tension of the consultation undergoes a dramatic increase, having awakened the attention of the double, the nahual... "The eyes of the possessed one jumped from their orbits, her mouth in a grimace of pain." This marks a pivotal fulcrum where the episode tips away from the mundane, mechanical realm of payment and rote procedures, to the arcane realm of trance-induced materialization... (Sacolick 2018, emphases mine).

Materialization is not impossible in quantum science. Moreover, like quantum particle/wave simultaneity, *Nahualismo* features two theme types, an "A type" invoking the capitalist worldview and a "B type" invoking the Nahualist realm. The "A" type is duple and relatively prosaic, with Western instrumentation. The "B" type employs indigenous instruments, asymmetrical groupings of quick tuplets, the dual identities of *hemiolae* cross rhythms, trancelike ostinati. The juxtaposition of theme types does not resemble classic-romantic musical forms that feature two contrasting themes, such as sonata-allegro form. Rather, the two types interact unpredictably, sometimes superposed, sometimes imitating each other, applying techniques of variation and moment-form (Sacolick 2018). The theme types' behavior seems to mimic that of unpredictable quantum particles. Yet the order in which they appear aligns with an account of a Nahualist exorcism recounted in de Baratta's ethnography. This account is quoted here following its chronological timeline of increasing entropy; the theme types used in *Nahualismo* are given, in order used, alongside the account.

Nahualismo's opening section 1 presents both types "A" and "B." The account reads "They arrived at her place, and after making payment, began the ceremony. In the dark grounds floated

mystery; on a stake was an owl on a chain; in the middle of the prophetic habitation was a stove on which burned loaves of copal; miraculous herbs twisted below the hot coals ..." (de Baratta, 1951, p. 263, translation mine). The walking tempo and rhythm of type A could portray the clients arriving at the *bruja's rancho*... (Sacolick 2018).

The next section 2, *Vaticinio* (divination), could portray the *bruja* performing diagnostics to determine the spells needed. Such procedures might be rote or mechanical, but they evoke intuitive flashes at random intervals. The theme is type B. An ostinato rhythm is varied with groups of tuplets. The account translates "When the light flickers, rising from the shadows, behind the hand that fans the fire... the *bruja*... recites chants to the rhythm of the swirling smoke" (de Baratta, 1951, 263).

The following section 3, *El Conjuro*, refers to casting a spell. It is slow, *forte*, deliberate, in A type duple rhythm but with notable devil's intervals. After a *fermata* (pause), comes a still louder *Marcato* section 4 adding elaborate syncopations, as the spell-casting intensifies. Characteristics of theme type B make more inroads suggesting quantum superposition. Indeed, this work deals with identity reconfiguration through intra-action between a client who has been possessed, and a *nahual*.

Nahualismo's next section 5, *El Sortilegio*, marks the midpoint. It tracks with a pivotal moment of the account in which the trance has deepened enough for the *nahual* to awaken. The theme type is B, and both the key and meter undergo marked changes.

Next the earlier *Vaticinio* (6) returns. Perhaps another divination is needed to determine next steps. Repetition is also an effective technique in ritual music to promote entrainment or trancelike states among participants.

As before, the second *Vaticinio* precedes *El Conjuro* (7) the spell, and *Marcato* (8). The account in *Cuzcatlán Típico* continues "The fire in the stove is dwindling; the shadows are lengthening in the corners of the *rancho*... In the gloom, the words of the exorcism... in cabala low, drawn out, mysterious, rolling in the sonorous waves of smoke: 'The *nahual* must leave, must free the client from evil, I ask it of the god Tecunal.'"

Next, a *Danza de la Cábala* (9) mimics a lugubrious tango. Aspects of both theme types create the ambiguity of a cryptic, occult dance.

A rhythmically free and technically showy *Cadenza* (10) follows, suggesting the freeing of supernatural energies. The music is free, too, of the character of either theme type, featuring rippling runs. "A dismal eddy shook the boundaries of the *rancho*, sending through the (client) that witnessed this a chill of terror" (de Baratta, 1951, p. 263). Freedom from either theme type again suggests superposition in which quantum items are neither particle nor wave, neither type A or type B.

The account continues with the manifestation of the *nahual* as the music proceeds to section 11, *El Hechizo*, bewitchment. The theme type is B.

The following *Piú mosso* section 12 raises the suspense with a shift to a faster duple. A rapidly hocketed alternation of notes between two sections of instruments symbolizes the duality, superposition, tension, and precarious unsustainability of the *nahual*'s imminent presence. 13, *Surge el Nahual*, The Nahual Arises, suggests unleashed forces rising and falling precipitously, as if jumping. Indeed, "... a large frog jumped from the stove" is text painted.

Finally section 14, *La Carcajada*, "Loud Laughter," serves as a codetta, with the hocketing fusing the two theme types. Similarly, the account text concludes: "croaking prophetically. (And as he told it to me I tell it to you, reader)." (De Baratta, 1951, translations mine). This schematic makes visible the intra-action of theme types across the contour of *Nahualismo*. *T* represents "text painting".

Theme type:	A B	BB	A A	BB	BB	AA	BT	B A	T T
Section #:	1 1	2 2	3 4	5 5	6 6	7 8	9 10	11 12	13 14

Superposing the quantum, ritual crucible analogy onto the schematic, the sequence of theme types could be a struggle between wave/particle, live cat/dead, or this identity/that. Through the Hesterian sustained intensity of the situation depicted, a third, Anzaldúan, synthesized, cathartic reality emerges in text painting, laughter, croaking, and physical emergence of the *nahual*. Laughter is a form of catharsis and surrender, and de Baratta used it in her subtitle, "*Diabolus in Musica*" (devil in music.) Rather than a condemnation of her own piece, this was likely a "devilishly clever" pun on the use of the tritone interval church ("diabolus in musica") once condemned by the Western church, in a ballet on a topic equally condemned. She uses the interval frequently throughout the piece. It appears in both theme types, both worlds. Which was de Baratta's real world? She enjoyed the comforts of an affluent life, but wrote that she often experienced more satisfaction when participating in the half-hidden indigenous traditions of festivity and magic (de Baratta 1951). She socialized with prominent artists who, while respected by the elite, shared her outrage at society's treatment of indigenous people and lived bohemian lifestyles. The transitions between theme types in *Nahualismo* reflect the coexistence of such contradictions: sometimes so smooth as to befuddle the listener as to when they have transpired; at other times abrupt, as if ready to instantaneously switch guises when operating in multiple spheres, as with Ek's strategic fluidity and Anzaldúa's "Which is real? They all are!"

Many mothers have experienced the angst of conflicts between childrearing and professional pursuits. Time, energy and attention are severely tapped for anyone playing both roles. Some experience identity crises, as they discover just what is required to serve multiple realities. Parenting itself causes some to have to mimic the norms of society while privately disagreeing with them. Choices are made. Goals may be dropped, or society may disapprove.

Perhaps de Baratta's adoption of elements of the bohemian lifestyle helped her to surmount the conflicts of conforming to one identity or the other, or of requiring perfection of herself while performing all identities. Or perhaps the arts provided the third space to ritually superpose or

synthesize roles. A closer look at the sequence of her life (if such were available) might reveal that her roles manifested sequentially, not simultaneously; that she reconfigured herself as needed. This does not preclude that she could be Anzaldúa's "all of these things," especially as Joan Vaccaro proves time's illusory and plural nature, and as Rebecca Coleman (2014) proposes that "... images of transformation can be understood as working through an intensive or immanent time, where time does not (only) move from the present to the future..." (pp. 39-40). Thus Emma Pérez (1999) beseeched us "Do not ask who I am and do not ask me to remain the same."

Identity crisis, a 20th century term, is faced by many who have had to balance homemaking with other careers; or who, like de Baratta and Pérez, have made choices regarding ethnic performativity; or who, like Joan Vaccaro and Anzaldúa, have redefined their sexual or gender identities. They and others like Hester who are brave enough to step into the quantum field of plural (infinite?) trajectories, have found a symmetrical space-time in which to immanently define themselves.

Conclusion

When asked the meaning of a particular song, Bob Dylan would throw the question back to his interlocutor. Hester is similar. He does not tell his listener what to expect; rather, he allows them to have an experience along with those on the stage. Like such artists, de Baratta seems to have followed her own muse. Within the crucible of a heritage including indigenous blood, a cultural narrative where indigenous massacres happened, and a social sphere where certain gender roles and religions were expected, she did what she needed to do when she needed to do it, whether or not it met expectations. This was no different than Anzaldúa, Vaccaro, Hester, or Zhilyaev and Vidokle. Vaccaro's goal "*To treat time and space on an equal footing at a fundamental level*" rescues time from captivity. As artists Zhilyaev and Vidokle (2018) suggest, "if you impose this (bi-directional time) model on art history, you will get a radical independence of each new art form without narrative." The art itself, like *Nahualismo* or *Quantum Elders Hip Hop Ballet*, becomes as a strategy to facilitate identity reconfiguration. It also becomes a site where reconfiguration of past and future is possible, through Coleman's intense, immanent time.

Maria Mendoza de Baratta may have done many amazing, albeit unlikely, things in *Nahualismo*. If scholarship were limited to regurgitation of empirical evidence, this idea would be reprehensible. Thankfully, scholarship today expects personal interventions, and newer feminisms, post-colonial historiography and quantum theory posit that multiple realities should and do exist, even in the past. During times of intense identity politics, the possibility for plural truths and interpretations to coexist is essential to society. The capacity to see history in new ways is part of this. Still, performativity of quantum plurality remains problematic among people negotiating complexities of race, gender or ethnicity. In El Salvador as elsewhere, censorship had devastating consequences on indigenous traditions and languages. De Baratta labored to preserve what she could, and by deft interactions with authorities, in which she perhaps presented only some parts of her identity, she was able to preserve some endangered knowledge of indigenous cultures.

As is often the case, this article will be discounted by some before its possibilities deploy. Still, what if *Nahualismo* was a matter of de Baratta setting forth, upon the ritual space of the stage,

her pluralistic view of how Nahualistic magic might function? At least she could begin to accustom the willing to another culture's beauties. Like Dr. Hester, whose intention is not so much to "entertain" an audience but rather to help participants to experience liberating transformations by juxtaposing plural realities, de Baratta might have sought to replicate a transformative experience that she or her informants had lived. As new feminists iterate, the arts are mighty tools for such endeavors.

Conversely, de Baratta may simply have wanted to follow in the footsteps of composers such as Stravinsky whose *Rite of Spring* both outraged and magnetized audiences with its treatment of indigenous ritual. Indeed, her writing about indigeneity was problematic, at times conveying skepticism of beliefs or condescension, while elsewhere rhapsodizing about the cultures. Quantum physics and feminist theory suggest that assumptions about her intentions are influenced by the mindset of the observer who has no real way to know, much like the person who has not yet opened Schrodinger's box. The point is not to give de Baratta a pass for colonialism. It is to explore plural alternatives. Until we are able to ride the backwards arrow of time and open the box ourselves, our biases indeed influence the narrative about Maria de Baratta and *Nahualismo*. Zhilyaev and Vidokle would not approve.

Whereas performative intentionality was not dominant in the discourse of 1930's El Salvador, it could have existed unconsciously in *Nahualismo*. The work contrasts the world of the *nahual*—uncircumscribed by the dictates, narratives and timelines of Western civilization—with the hyper-rational, capitalist trajectory plummeting ever and only forward in time. As *Nahualismo* builds towards its finale, intensity builds too. This is common to music in many traditions. Nevertheless, it is a matter of physics that as intensity in a system builds, things transform. It is a matter of quantum physics that things can be other than they appear, or multiple things at once. It is a matter of newer feminist theory not to be circumscribed by time, but to use it as a crucible site to reconfigure reality. It is for artists to employ these techniques at will. It is for scholars to continually investigate the past, seeking more possibilities, thus more truths.

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