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# Poetics of Intracellular and Extracellular Water: A Biophysical Consideration of Black Feminist Thought

# *ABSTRACT*

Poetics is the articulation of aliveness to the extent that it may be written (Quashie, 2021). It is the approximated space that engages the figuring of one's existence in relationality. This rhetoric of being and belonging in relationality supposes that individualism is death in a world that opposes life (Quashie, 2021). Aliveness is the possibility that movement might happen, the force of an alive being. When informed by the forces of fear and degradation, one may be faced with a choice to accept or refuse. In the act of refusing, the potential for something more than the world's divisions hangs in the air. The world is full of fluid existence--being. In the Western scheme of hierarchy and subordination, the categorical devaluation of some beings over others is dictated by the dominant and empowered (Wilkerson, 2020; Wynter, 2003). Poetry poses another way, even the possibility of becoming and undoing (Quashie, 2021). Philosopher Sylvia Wynter suggests that the world needs a new universal way of being, a mode of experiencing in which every form of life is beholden to one another (Wynter & Scott, 2000). Through linguistic loopholes and words of world-making, poetics is the development of theory (Gumbs, 2020). It is an investigation of what is possible and might be.

Keywords: Poetics, Intracellular, Extracellular, Black Feminist.

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#### I. Introduction

Poetics is the articulation of aliveness to the extent that it may be written (Quashie, 2021). It is the approximated space that engages the figuring of one's existence in relationality. This rhetoric of being and belonging in relationality supposes that individualism is death in a world that opposes life (Quashie, 2021). Aliveness is the possibility that movement might happen, the force of an alive being. When informed by the forces of fear and degradation, one may be faced with a choice to accept or refuse. In the act of refusing, the potential for something more than the world's divisions hangs in the air. The world is full of fluid existence--being. In the Western scheme of hierarchy and subordination, the categorical devaluation of some beings over others is dictated by the dominant and empowered (Wilkerson, 2020; Wynter, 2003). Poetry poses another way, even the possibility of becoming and undoing (Quashie, 2021). Philosopher Sylvia Wynter suggests that the world needs a new universal way of being, a mode of experiencing in which every form of life is beholden to one another (Wynter & Scott, 2000). Through linguistic loopholes and words of world-making, poetics is the development of theory (Gumbs, 2020). It is an investigation of what is possible and might be.

# **Poetic Parallels**

Study as an informing endeavor may be understood as consciousness and relational praxis, positioned within the politics of looking (Quashie, 2021). This type of looking may be an act of shared relationality that distinguishes differences, perhaps with destructive intent. This study of Black Feminism in water resists the harmful apathetic tendency to cement a category of subordinated being. Collective looking and study is collective consciousness (Quashie, 2021). In an effort to look and speak with intentional care, the state of water studies—or the truth of water—will be referred to as "Water Consciousness." The state of thriving Black femaleness will be called "Aliveness" (Sharpe, 2016; Quashie, 2021). The conception of Black femaleness is, in itself, a response to a greater wrong

enacted in the traumatic construction of a gendered and racialized world (Quashie, 2021). The inherent humanity of Black womxn simply is, but the shifting episteme of Western domination has relegated people with overlapping Blackness and femaleness to the most dehumanized margins at the intersection of race and gender (Crenshaw, 1989; Wynter, 2003). Black womxn are performatively called to claim the right to their human manner of being, only necessitated to the extent that their Aliveness is oppressively denied them (Quashie, 2021). In opposition to the white- and maledominated world, Black Feminist Thought is a place that covers the expanse of what it is to be Alive (Quashie, 2021).

These descriptions of life and the optics of water are not laboratory methods that may be simulated for one's analysis or comprehensive world understanding. The definitive may not be comprehensive. Further, definitions are revised, redacted, and annotated in an effort to clarify values and sharpen principles of existence (Sharpe, 2016). A comparison between the biophysics of water and Black Feminist Thought is, by no means, a scientific reference point for mathematical functions or those types of experiments that require close-toed shoes and an emergency eyewash station. However, the understanding that may be cultivated by drawing parallels between disciplines may offer a deeper sense of human empathy for the sheer fact that water connects all life (Gumbs, 2020; Cooke & Kuntz, 1974). Participation in this radical experiment of relational empathy is a study in, or a consciousness of, what it is to be Alive (Quashie, 2021). In a world that harbors a hostile aversion to Black and feminized life, Aliveness is already a struggle without the threat of ever-increasing limitation. As a condition of being, one's limitations have possibility to be reimagined and transformed (Quashie, 2021). A poetic intervention may demonstrate the fluidity of personal boundaries (Quashie, 2021). By the power of poetics, one's identity need not inhibit their capacity to identify with experience not their own (Quashie, 2021).

#### **Extracellular Water**

Chemists and physicists alike have attempted to form comprehensive theories about pure water with partial success and poor representation (Bukowski et al., 2007). These theories are constructed using quantum mechanics, forming understandings of the potential of water that are rendered imprecise by unavoidable numeric approximations. Water molecules are deceptively simple in their atomic structure, yet water is one of the most complex liquids and solids (Bukowski et al., 2007). Larger clusters of water molecules make larger datasets and improve the accuracy of representative mathematical functions, yet mathematical simulations, or digital imaginings, have no idea what to do without being told the exact minutia of their next step.

Laboratory scientists know that mechanisms of molecular jump orient water in the same direction, even as the molecules vibrate and bumble around one another (Bukowski et al., 2007). The self-orienting aspect of water molecules is the key to life because, by organizing together, water molecules may act to order the energies and structures of water-soluble biological matter (Zielkeiwicz, 2005). The life-availing behavior of water is understood and documented. However, key functions such as the dispersion component and intermolecular interaction energy of liquid water cannot be described using scientists' little number crunchers and tidy models (Bukowski et al., 2007). Water molecules come together with enough strength to make an energetic force field, but it is weak enough to allow for a loose and constantly flowing structure. The same characteristics that create fluid unpredictability simultaneously confound water researchers and produce the perfect conditions for the possibility of life.

# **Parallels of Extracellular Potential**

The world feels the force of water and the force of Aliveness, though its understanding of those powers may not be gleaned through a perfect calculation of their locations. The power of Aliveness and water can be observed in the enactment of breath and the life that they avail (Cooke & Kuntz, 1974; Sharpe, 2016; Ouashie, 2021). The fluid and relational conception of the human has been solidified and inhibited by constructed categories of race and gender (Crenshaw, 1989; Wynter & Scott, 2003). Might the world as a collective be able to undo and rethink past models and conceptions of racial and gendered possibility (Quashie, 2021)? An evolving quantum conceptualization of the chemical properties of water suggests it may be done, though not without care and intention (Mobley, 1995). The shifting epistemes of the world indicate the impermanence of rigid ideological frameworks (Wynter, 2003). A permanent structure may be harmful in that it does not give room for radically changing states of matter. This examination of water and Black Feminism serves to celebrate the transformative potential for a better and more caring world (Sharpe, 2016).

#### **Intracellular Water**

The generalizable characteristics of water are not embodied by the forces that are enacted upon these bumbling bridges of relationality. Similarly, Aliveness is drawn in the plurality of oneness, not as the result of a problem in question (Quashie, 2021). Contextualization of water within cells does not define the subject, or even what can be known about the subject. However, the ways in which one might look upon or study intracellular water are altered by the interiority of cellular function (Cook & Kuntz, 1974). Water is the most important solvent in nature, the most suitable molecule for the holding and moving of dissolvable matter (Zielkiewicz, 2005). The variable multitude of conditions within cells alter the movement of water, as electromagnetic push and pull cause some biological components to "stick" and others to "glide." This kinetic difference from within cells creates a constant osmotic pressure that prevents freezing and facilitates the movement of solutes (Cook & Kuntz, 1974). From DNA to proteins to fatty acids, the cell as the most basic unit of life-while foundational-is not simplistic (Cooke & Kuntz, 1974). Some principles appear to offer a universal narrative, but the only universal truth for all alive beings is that they are and are of water.

Water Consciousness indicates that the practically magical life-giving power of water lies in its potential for hydrogen bonds (Zielkiewicz, 2005). Water molecules are strongly ordered, but they are held together and arranged by the slight polar magnetism of hydrogen bonds. Due to water's unique electromagnetic interaction with peptides (the building blocks of proteins), water solutions are the only environment in which proteins are possibly organized as the machinery for all cells (Zielkiewicz 2005). The lifetime of a hydrogen bond is incredibly short, seemingly antithetical to the perception of a strongly ordered liquid (Zielkiewicz, 2005). However, the constant movement of water with its simultaneous ability to form a spatial network of hydrogen bonds allows it to interact with all biomolecules (Mobley, 1995).

# **Parallels of Intracellular Potential**

Like the hydrogen bonds between water molecules that serve to orient the collective, humanization is an extension of acknowledgment (Bukowski et al., 2007; Quashie, 2021). Those aspects of simultaneously fluid and organized connection that seem diametrically opposed may point the collective towards progress that cultivates Aliveness (Quashie, 2021). The application of imagination to something beyond and other than what is known embodies the action potential of relationality between human subjects (Quashie, 2021). For one seeking to dwell in Aliveness, generosity and gift may be the ever-changing betterment and stability of one's own being. A gift as an extension of relation may inform the senses for future research, simulation, and consciousness of collective change.

Consciousness and Aliveness are not competing for space in this world (Quashie, 2021). The thriving of one is not positioned in a zero-sum game amongst all because the evolution towards care will not detract from the thriving of another. The degradation of Black and feminized life by denial of the right and burden of being is a colonial project of subordination (Wynter, 2003). Rather than pushing the whole of humanity down by constructing an ideology of sub-humanity, the world may only benefit from acknowledging and celebrating Aliveness in the human capacity of Black womxn (Quashie, 2021; Scott & Wynter, 2000).

# **Epidermal Reaction to Water**

Long-term contact with water affects normal skin barrier properties (Firooz et al., 2015). Though water makes up approximately 80% of the mass in living cells, prolonged exposure to this life-liquid can disrupt cellular function (Cooke & Kuntz, 1974). This is one humanly tangible interaction between intracellular and extracellular water. The biophysical properties of the skin (e.g., pH) are altered, potentially causing irritant contact dermatitis or augmenting the chemical and mechanical stripping of the skin. The skin research conducted by Firooz et al. (2015) emphasizes the detrimental aspects of permeability, but this increase in permeability may be compared to enhanced care for the Aliveness of a world brimming with ever-changing beings (Sharpe, 2016; Quashie, 2021). The skin becomes more likely to absorb substances that come in contact with it (Firooz et al., 2015).

In other words, it becomes more responsive. Disruption of lipid structures creates a vulnerability that surpasses the superficial and requires increased attention to intentions of healing, so that the optimal conditions for life and growth may be renewed (Firooz et al., 2015; Sharpe, 2016)

# **Optics of Water**

In the same fashion that Aliveness presents as beings of body, bodies of water dwell on the planet's surface as a variety of body types-virtually all shapes and depths. Both Water Consciousness and Aliveness elusively resist the representation of themselves captured in a laboratory (Bukowski et al., 2007; Gumbs, 2020). Observation in containment is not an accurate representation of natural phenomena. Pure isolation does not occur in nature but is utilized in lab models to generalize the potential of all. The plurality of the singular is in the implication of greater connection beyond the individual (Quashie, 2021). Like Water Consciousness, the representation of Aliveness ought to be rendered as a subject of energy, capacity, and action potential (Quashie, 2021; Zielkiewicz, 2005). Unlike endeavors in the name of Water Consciousness, Aliveness embraces the abstracting practice of approximation (Quashie, 2021). The world's bodies of water, or water for the looking, are difficult to write mathematical functions for because of the confounding multiplicity of world variables (Mobley, 1995).

Measuring light in the midst of moving water is difficult enough, but calculating the conditions of turbid water may be next to impossible. The provision of explanation is transparency that brackish waters may not offer (Gumbs, 2020). Scientists try to see through water containing high particle density, but perhaps one might find it within them to simply respect the turbid waters as they are (Gumbs, 2020; Mobley, 1995; Quashie, 2021). The muddy reality of organic and inorganic particles suspended in aqueous bodies of the world reflects the unknowability of Aliveness in its totality (Mobley, 1995; Quashie, 2021). Can one understand the value of an entity without attempting to map its entirety? Maybe refraining from such an endeavor requires restraint and care from the onlooker, an observer who resists the urge to articulate and explain definitively (Sharpe, 2016; Quashie, 2021).

# **Parallels of Optical Properties**

In imagining a world of Aliveness, one may think like a work of art (Quashie, 2021). Direction and guidance may be a component of artistic subjects, but the enactment of approximation is refusing direction altogether (Quashie, 2021). Within data, there is accountability (Mobley, 1995). For example, knowledge about the optics of water sheds light on the realities of pollution to inform political change-supposedly. The anti-Blackness of the world informs the globalized sense of Aliveness and accountability (Quashie, 2021; Scott & Wynter, 2000). Through poetics, the manipulation of rhetorical norms may help shape the way one understands approximated datasets of un-Aliveness (Quashie, 2021). By understanding the specifically imprecise patterns and predictabilities of the world, Black womxn navigate the unresearched and unspoken phenomena (Quashie, 2021). They dwell in spaces of change, even as they evade the hunter on the Archipelago of Otherness, even as they engage in refusal through fugitivity in brackish waters (Gumbs, 2020; Wynter, 2003). Linguistic loopholes and poetics may allow one to dwell in the potentiality of worldmaking without knowing it in its totality (Gumbs, 2020; Quashie, 2021).

The oceans may act as a mirror of sorts, reflecting the world's work back on itself. Yet, there are truths that remain clouded or unseen. Turbid or brackish water can offer Aliveness by empowering fugitivity of being and invoking mystery (Gumbs, 2020; Quashie, 2021). At the intersection of race and gender, transformation within Aliveness has helped Black womxn outlive the lies of the oppressor (Crenshaw, 1989; Quashie, 2021). Despite the ghostly predators hunting in brackish water, the interiority of Aliveness is a form of oppression resistance that breathes life into the bodies of Black womxn (Gumbs, 2020; Sharpe, 2016; Quashie, 2021). This may be a difficult task in a world so fixated upon recognition, that it drowns (Gumbs, 2020). One may still gain consciousness of the invisible, a sense of what is beyond sight. This sort of consciousness is recognition of privacy and unknowability (Quashie, 2021). Some methods of measurement cannot, or should not, be applied to interiority. Sometimes the unknown can be kept mysterious as a method of care (Sharpe, 2016).

#### Held and Moved

Christina Sharpe (2016) describes Black life lived as "wake work," which emphasizes perceiving differently what the world looks like and can be. This sort of differentiation is not one of destructive intent, rather it serves to demonstrate the potentiality that is offered by sitting with "life's deathness" (Sharpe, 2016). One of her conceptions of wake work is embodied by presence and care as a celebration of Aliveness. Black womxn demonstrate the power in change and the power of change. By extending outwards in relationality at the same time as imagining a different way of existing, Black womxn shape their Aliveness of being (Quashie, 2021). Water molecules shape one another and increase their collective stability of orientation, just as the singularity of oneness offers the individual a sense of potentiality (Bukowski et al., 2007; Quashie, 2021)

The Atlantic Ocean in all its breadth holds the biochemical life-essence of kidnapped Africans in residence-human flesh imbued into that salty body of water that may as well be a sea of tears (Sharpe, 2016). The Middle Passage shapes the world still as a pastness that is not yet past (Sharpe, 2016). Alexis Pauline Gumbs (2020) wrote that "there is blood in the water at the limits of our dreams." Colonialism and genocidal intent may be re(a)d everywhere, all over the world-between the lines and even upon the very faces of people of color (Wynter, 2003). Might the collective imaginings of the world be limited by this narrative written in blood?

# **Deceptively Simple**

Kendrick Lamar (2022) utters, "Fuck callin' it culture," in his song "The Heart Part 5". The "culture" that Kendrick Lamar critiques may be understood as the oneness of Black communities that is embodied by the independent movement of singular persons (Quashie, 2021). Like water molecules in their unpredictable liquid motion, the individuals within the culture may strike against one another when charged by an outside force (Bukowski et al., 2007; Lamar, 2022). The harm that Black communities experience is shaped by external forces of oppression, the heat that is impossible to bear without sometimes breaking the cohesive surface tension of the collective. Violently bursting forth from relational proximity to others of the same oneness, some molecules dissipate into the air and leave rupture in their wake (Sharpe, 2016). This sort of displacement in Black oneness may be an example of the pain also encompassed within.

# Fluidity of Aliveness

Quashie (2021) asserts, "Experience, then, is a state of suspension in the intensity of presence and possibility, a state of readiness and surrender." In relation to the body of knowledge around the optics of water, we may understand the experience of being, like particles dissolved in liquid, embraced by the essence of life (Mobley, 1995). One may move through existence suspended amongst the simultaneously variable and homogenous molecules that vibrate with fluidity and potential for the emergence of life. Just as a world of organismic possibility is of water, humanization is of the Aliveness of Black womxn (Cooke & Kuntz, 1994; Quashie 2021). In the very midst of Aliveness, Black femaleness embodies the prerequisites for a life of being and becoming (Quashie, 2021).

Kendrick's (2022) rejection of the culture in its present state is his own readiness for possibility. The imagining of more than what is held in the now may be the start of every potential relationality. His exclamation of refusal, "Fuck callin' it culture," is a punching short critique. This protest may be poetically misheard as a condemnation, or an unveiling of hegemonic technique. Kendrick does not explicitly name those epistemic roots of global domination (Wynter, 2003). However, this new phrasing points to the origins of gendered oppression and racialization. The new ear may understand his line differently, a more specific rebuke invoked by brash mondegreen. This exclamation may evoke an image of the ghostly hunter who preys on the Other-truth of that New World vulture may be heard in the misheard phrase: "Fuck colony culture!" (Lamar, 2022; Wynter, 2003).

#### References

Bukowski, R., Groenenboom, G. C., Szalewicz, K., & Van der Avoird, A. (2007). Predictions of the Properties of Water from First Principles. Science, 315(5816), 1249-1252.

- Crenshaw, K. (1989). Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics. University of Chicago Legal Forum, 1989(1), 139-167. http://chicagounbound.uchicago.edu/uclf/vol1989/iss1/8
- Cooke, R., & Kuntz, I. D. (1974). The Properties of Water in Biological Systems. Annual Review of Biophysics and Bioengineering, 3(1), 95-126.
- Firooz, A., Aghazadeh, N., Rajabi Estarabadi, A., & Hejazi, P. (2015). The Effects of Water Exposure on Biophysical Properties of Normal Skin. Skin Research and Technology, 21(2), 131-136. https://doi.org/10.1111/srt.12167
- Gumbs, A. P. (2020). Undrowned: Black feminist lessons from marine mammals. AK Press.
- Mobley, C. D. (1995). The Optical Properties of Water. Handbook of Optics, 1(43), 43.
- Lamar, K. (2022). The heart part 5 [Song]. pgLang; Top Dawg Entertainment; Aftermath; Interscope Records.
- Quashie, K. (2021). Black aliveness, or a poetics of being. Duke University Press.
- Sharpe, C. (2016). In the wake: On blackness and being. Duke University Press.
- Wilkerson, I. (2020). Caste. Random House Publishing Group.
- Wynter, S., & Scott, D. (2000). The re-enchantment of humanism: An interview with Sylvia Wynter. Small Axe, 8(1), 119-207.
- Wynter, S. (2003). Unsettling the Coloniality of Being/Power/Truth/Freedom: Towards the Human, After Man, its Overrepresentation—An Argument. CR: The New Centennial Review, 3(3), 257-337.
- Zielkiewicz, J. (2005). Structural Properties of Water: Comparison of the SPC, SPCE, TIP4P, and TIP5P Models of Water. The Journal of Chemical Physics, 123(10), 104501.