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Featured Article

How the Space Theory Transformed the History Discipline

Rebecca Vitenzon, Oxford University

Abstract – Gender, labor and race historians have made a strong case for space as a social construct. A Foucauldian framework of analysis of space has allowed historians to reveal histories of the subaltern, which are otherwise often ignored. Interactions in space are social relations, as individuals relate to the space around them in response to other individuals and societal norms. Even so, the materiality of space cannot be understated, as the built space impacts how those interactions are produced and unfold. The consideration of the materiality of space as an additional layer to social space, make spatial history a more effective and illuminating methodological approach.

I. INTRODUCTION

Although historian Leif Jerram has criticized historians for overusing imagined space, stating that space is the material

physicality of location, gender, labour, and race, historians have used space as a social construct to successfully unearth otherwise hidden transcripts of power relations and resistance [1]. Rather than looking at ‘imagined space’ as in competition with ‘built space,’ a layered definition of space must be adopted. As Sewell has argued, space is imagined, experienced, and built [2]. Discursive imagined space can be defined as the ways in which individuals understand their environment, while experienced space is the ‘material interactions between people and their environment.’[2] Finally, the built environment can be defined as the physical structures that occupy spaces [2]. These overlapping layers must be examined through a social constructivist Foucauldian lens, as space is fundamentally interlinked





with the production and reproduction of 'economic, political, and cultural power,' and the reaction of those in power and of the subaltern to that power [3]. This relationship of space with power means that 'spatial relations are social relations' [4]. The extent to which spatial theory has effectively been applied by labour, gender, and race relations historians must be examined to establish its use in the discipline of history.

II. CAPITALISM AND CLASS DIVISION

When space is considered through the socially constructivist lens, individuals who would otherwise be seen as passive become agents, since the ways in which they relate to space impacts that space. This is especially evident when labours' relations to space are considered. Lefebvre argued that space is produced socially by the hegemonic class, asserting their dominance in society [4]. Thus capital becomes the 'primary maker of the geography of capitalism.' [5] Lefebvre's theory was influenced by his Marxist approach, which became popular in economic geography in the 1970s in questioning the relationship

between capital and space [5]. Lefebvre's focus on economic geography does not give enough agency to subaltern people existing and resisting within such elite-dominated spaces. In contrast, Herod has argued that in response to capitalist space, workers construct landscapes in a way which increases their social power and diminishes the power of capital [5]. Judith Butler similarly argued that public protests not only take place in the built space, but they also "reconfigure the materiality of space." By occupying spaces controlled by capital and those in power, the subaltern 'performatively lay claim' to the space and assert their right to it.

The reclaiming and coopting of space by workers in times of strikes has been explored by Percy. By comparing strikes in early twentieth century Chicago and London, Percy found that workers asserted their existence and attracted attention to their cause by claiming public space [3]. Their alternative use of public space strengthened collective action as it impacted how they related to one another, strengthening working-class



consciousness and solidarity. People understand space in relation to other people, even as the physicality of the space also impacts their relationship to space. For example, there were some crucial differences in how the strikes played out in London and Chicago due to the different physical configurations of these urban spaces. In Chicago, the grid street layout allowed strikes to spread faster and made maintaining picket lines easier. In contrast, the web of streets in London meant that workers used parades and mass meetings for more effective resistance [3]. In this case study, space was produced socially as strikers constructed an alternative public sphere in which they asserted their right to be in middle-class neighborhoods and to dominate the streets. Percy demonstrates how the materiality of space impacted that production. This demonstrates the effectiveness of thinking about space predominantly as socially constructed, but also considering built space.

III. GENDER AND CONCEPTUALIZATION OF WOMEN

Historians of gender have also made effective arguments for space as a social construct. Traditionally, public space has been constructed as belonging to men, with women being confined to the private

sphere. Women breaking this barrier by entering public spaces was often thus seen as a trespass, both by those who sought to police them, and by women themselves. For example, in Chicago in the late nineteenth century, public drinking was seen as a masculine act, with only 'disreputable' women drinking in public [6]. Only the rise of commercial gender segregated spaces, gave upper and middle-class women the ability the ability to drink and push the boundaries of the private sphere. Such spaces still belonged predominantly to white, middle-class women, as African American women were often barred from entering them, as were working-class women [6]. This demonstrates the extent to which capital does play a role in space formation, as Lefebvre has argued. The rise of consumerism in the late nineteenth and early twentieth centuries led to the creation of spaces which expanded the private sphere into the public one for women, demonstrate the power capital plays in determining spatial relations, even though such relations remain socially constructed.

Due to the conceptualization of women as belonging to the private sphere, women striking in public spaces has traditionally been treated both more severely and seriously. During the Polish Solidarity



resistance strikes in Lodz in 1980, women marched with strollers and babies. These women not only claimed the physical public space, but also impacted how that space was imagined (both by them and others) by bringing objects of motherhood and the traditional private sphere into the public. As a result, the march in which they participated in was one of the most successful actions of the Solidarity Movement. The success of this march was predicated on a societal understanding of the streets as a public space in which mothers did not belong. By examining women in the Solidarity movement and their interactions with space, Kenney unearthed how women used popular understanding of public space to their advantage, reconfiguring the streets into sites of protest which shocked authorities and led to positive action.

Although Rosa Parks has been the traditional image of the American Civil Rights Movement, Kelley used space as a social construct in order to reveal an otherwise hidden transcript of resistance [7]. Kelley's examination of space has broadened the understanding of historians about the Civil Rights Movement, leading Hall to conclude that there was a 'Long Civil Rights Movement' which spanned decades rather than beginning and ending in the 1960s. Kelley used police reports to analyze how public transportation in Birmingham, Alabama in the 1940s became a theatre of daily resistance [7]. Driven by white drivers and policed by them and by white passengers, the bus was a white space in which race relations were rigidly maintained. Drivers controlled who entered the supposedly public space, often passing by black passengers at stops [7]. Further, the space was hierarchical, as black passengers were forced to sit at the



back of the bus or to stand. Kelley found that in response, black passengers would often speak loudly and cause a ruckus, aiming to make the white passengers, who were trapped in that space for the duration of the ride, uncomfortable [7]. Police records showed that black passengers could be arrested for any action that asserted their right to being in the space – from making noise, to sitting in the white-only seating area, to arguing with fellow white passengers or the bus driver [7]. Such resistance aligns with Butler's theories about 'performatively laying claim' to space in the struggle for freedom [9]. Kelley's analysis of the bus as a socially constructed space which reflected and reproduced the race relations present in American society deepens our understanding of those race relations, reconfiguring the struggle for Civil Rights from landmark moments like the March on Washington to the everyday spaces of black working-class resistance,



like the bus.

Further, the eventual seeming acceptance of segregation in the United States by white middle-class people is also deepened by a spatial analysis predicated on social construction. Kruse found that white middle-class Americans in Atlanta in 1950s and 1960s responded to the desegregation of 'public' spaces by deciding they no longer wanted to participate in such spaces [8]. As a result, cities like Atlanta seemingly accepted desegregation – as a result of the reconfiguration of how public spaces were imagined. White middle-class Americans retreated to the private sphere and moved out of urban centers to the suburbs, essentially re-segregating cities. There was also an economic dimension to this conception of space, as white Americans refused to pay their tax dollars to spaces which African Americans could also use [8]. In contrast, the white working-class virulently remained opposed to desegregation because they used public spaces and did not have the economic power to leave them [8]. Desegregation thus exacerbated the divide between middle and working-class whites. Kruse's analysis upends the narrative of the successful Civil Rights Movement leading to the sudden end of segregation and change in opinions of white Americans, demonstrating that just as the African American struggle for freedom was a constant for decades, so was the white resistance to that struggle.

REFERENCES

- [1] Jerram, Leif. "Space: A Useless Historical Category for Historical Analysis." *History and Theory* 52 (2013) p. 400-419.
- [2] Sewell in R. Percy, 'Picket Lines and Parades: Labour and Urban Space in Early Twentieth-Century London and Chicago', *Urban History*, 41/4 (2013), p. 457.
- [3] Percy, Ruth. "Picket Lines and Parades: Labour and Urban Space in Early Twentieth-Century London and Chicago." *Urban History* 41 (2014): 456-477.
- [4] Lefebvre, Henri. "Space: Social Product and Use Value." In *State, Space, World: Selected Essays*, edited by N. Brenner and S. Elden, translated by J. W. Freiberg, 185-195. Minneapolis: University of Minnesota Press, 2009.
- [5] Herod, Andrew. "From a Geography of Labor to a Labor Geography: Labor's Spatial Fix and the Geography of Capitalism." *Antipode* 29 (1997): 1-31.
- [6] Remus, Emily A. *Remus, Tippling Ladies and the Making of Consumer Culture: Gender and Public Space in Fin-de-Siècle Chicago* (2014).
- [7] R. Kelley, "'We are not what we seem': Rethinking black working-class opposition in the Jim Crow South" (1993) p. 99.
- [8] Kruse, Kevin M. "The Politics of Race and Public Space: Desegregation, Privatization, and the Tax Revolt in America." *Journal of Urban History* 31 (2005): 610-633.
- [9] Butler, J. 'Bodies in Alliance and the Politics of the Street' <http://eipcp.net/transversal/1011/butler/en>.



How Racism Kills: Poussey Washington's Death in Orange is the New Black

Giselle Hengst

A*bstract* – Racism is one of the important social problems in the United States that must be addressed. Racism and its consequences are well highlighted in popular culture, including movies and shows, to further emphasize the effect of racism. This paper will discuss institutional racism and how it is demonstrated in the context of the judicial and prison system through an analysis of a show called Orange is the New Black. From analyzing one of the characters, Poussey, and her death, this research will discuss different ways racism could be manifested and the different forms of racism in an institution. This paper will also discuss the extreme outcome of racism in our society – death.

I. INTRODUCTION

Racism, quite literally, kills. In the United States, racism is ubiquitous and

stems from the legacy of race-based slavery. One area where racism is particularly salient is in the criminal justice system. Despite the constitutional promise of equal protection under the law, racist policies such as the War on Drugs have led to laws that disproportionately affect Black people such as severe penalties for drug use and possession, mandatory minimums, life sentences, and three strikes laws [1]. These policies are examples of institutional racism. Institutional racism is racism embedded in political and social structures, resulting in disadvantages for minorities based on socially assigned race [2]. On the other hand, personally mediated racism describes the prejudice and discrimination that occurs between people of different races [2]. Importantly, personally mediated racism upholds the

social norms that prevent institutional racism from being eradicated. In the Netflix series *Orange is the New Black*, the death of a Poussey Washington, a young Black female inmate, demonstrates how personally mediated and institutional racism work together to allow her death to happen while simultaneously protecting the white correctional officers from being held responsible

II. BACKGROUND SUMMARY

In season 4, episode 12 of *Orange is the New Black*, Poussey Washington is killed by white correctional officer (CO) Bayley. The incident occurs during a protest against head CO Piscatella's inhumane ways of managing the prison. The inmates are gathered in the cafeteria and they stand on the tables, refusing to come down until changes are made. Piscatella orders his COs to get the prisoners down from the tables and chaos ensues. Suzanne, one of the inmates, begins freaking out and Piscatella orders Bayley to "Get that fucking animal out of here, now. Get her to Psych!" [3]. While Bayley tries to physically apprehend Suzanne, Poussey attempts to

get Bayley off of Suzanne because Poussey knows Suzanne is mentally unstable and does not realize what she is doing. In response, Bayley pushes Poussey to the ground and digs his knee into her back. Despite Poussey's cries for him to get off of her, she ultimately suffocates and dies under Bayley's weight. Episode 13 focuses on the aftermath of her death by showing the inmates' reactions, as well as the conflict between Warden Caputo and the private, for-profit Management and Correction Company (MCC) in dealing with the situation.

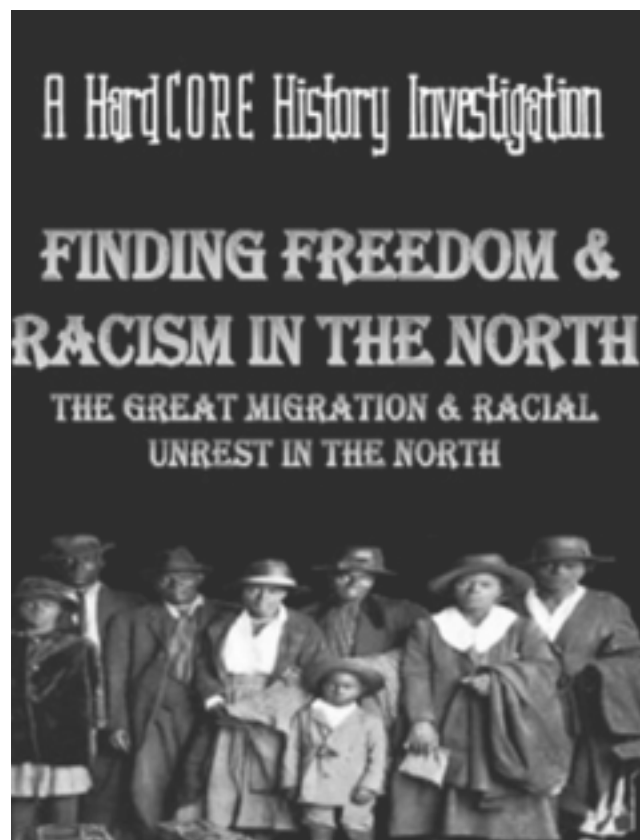
III. DISCUSSION

The most prominent examples of personally mediated racism come from CO Piscatella, who treats the inmates, especially the inmates of color, as animals. During the protest, he literally refers to Suzanne as an "animal," evoking stereotypes about Black people that date back to the era of slavery [3]. By calling the inmates animals, he dehumanizes them and signals to the COs under his supervision to do the same. In doing so, he fosters an environment that allows Poussey to be killed because



personally-mediated racism is considered acceptable. After the cafeteria has been cleared, Piscatella begins crafting a story to protect himself and the other COs from being found guilty for Poussey's death. He tells Caputo "[Poussey] was extremely violent. That's how we start right out of the gate. 'We were dealing with a violent inmate.' Don't give them anytime to start in with their victim's rights crap. Our man was doing his job. This was not about race. We can't have our inmates attacking our COs" [4] Caputo retorts "she weighed 92 pounds. She couldn't attack your shoe" [4]. Again, Piscatella is drawing upon stereotypes that paint Black people as aggressive, violent, and possessing super strength. Although Poussey could not have reasonably posed a threat to the COs, Piscatella attempts to use racist stereotypes to protect himself.

Meanwhile, CO Bayley is coming to terms with his actions while being driven home by CO Dixon. Dixon tells Bayley "Listen, it's not your fault man. I mean speaking as a big guy -- sometimes you just don't realize. I mean I've sat in chairs that have broken right under me" [4]. In this instance, Dixon objectifies Poussey by comparing her to a chair. The violence against her is thus rendered acceptable because she is no longer considered a human with rights. Later, CO Coates laments that Bayley is "a kid" and that he is "all upbeat and shit, like a puppy. And now he's ruined. He'll be all fucked up forever" [4] Although Coates compares Bayley to a puppy, he does so through the use of a simile, rather than literally calling him an animal. While Poussey is being depicted as a violent animal, Bayley is being depicted as a kid and and incapable of harm. Coates's racist attitude prevents him from even realizing that Poussey's life



is literally "fucked up forever."

The subsequent internal investigation of Poussey's death and the attempts to cover up the truth of the incident exemplify institutional racism. Although Caputo tries to get MCC to allow him to call the police, the MCC administrators tell him that "we'll call the police as soon as we have an angle" [4]. The MCC administrators are frustrated that they cannot find a reason to vilify Poussey. Poussey is in prison for a nonviolent crime -- trespassing and possession with intent to sell cannabis. Here, it is hard to ignore the fact that Poussey would likely not be in prison for this had she had been white. This is the result of institutionalized racism in the justice system, which leads to harsher punishments for Black people versus white people who have committed the same crime [1] Furthermore, as the administrators look on social media for criminalizing photos of Poussey, one of



them pulls up a picture of her smiling with friends and describes it as “thuggy” [4]. Yet again, the use of the racialized term “thug” is a racist attempt to condemn Poussey.

The hierarchical structure of MCC keeps Warden Caputo from calling the police because he fears losing his job. The lack of an agreed upon plan about what to do results in Poussey’s body being left on the cafeteria floor for over twenty-four hours. Not only was Poussey the victim of racism while she was alive, she is further victimized in death by the MCC’s lack of action in the face of need. At the same time, the COs in the prison are shown agreeing to follow Piscatella’s false narrative that Poussey had a knife and tried to attack CO Bayley [4]. The institutional culture at the prison promotes this kind of thinking, as the COs already view the inmates as lacking humanity and are committed to protecting their jobs rather than pursuing justice for Poussey.

In another scene, one inmate tells another “Things will change now, you know. That’s what’s so fucked up. Takes someone dying for them to do something” to which the second inmate responds “they ain’t gonna do shit” [4]. This exchange illustrates the insidious nature

of institutional racism: because racism is embedded structurally into the criminal justice system, it is extremely difficult for any one event or person to put an end to it.

IV. CONCLUSION

Ultimately, *Orange Is the New Black* illustrates how institutional racism and personally mediated racism coincide to produce racial inequalities in the criminal justice system. The show is an example of using a new medium to demonstrate the relevant and existing social justice problems in our society today [5]. Unfortunately, Poussey’s death is just one instance where these forces come together to result in injustice for people of color. It is clear that racism can be a matter of life or death and that there are structures in place that uphold it as an acceptable norm. Poussey’s death mirrors the terrible reality of mass incarceration and *Orange Is the New Black* overall illustrates the various ways in which racism is manifested to protect those in power from any real consequences for their actions.

REFERENCES

- [1] Kreager, Derek A., and Candace Kruttschnitt. 2018. “Inmate Society in the Era of Mass

Following Kendi: Anti-Racist Teaching

“we define “anti-racist teaching” as **intentional** syllabus design, class content, or pedagogy that creates or develops racial equity with applications for face-to-face and remote/hybrid teaching environments.”

- Sheridan Center Newslette





- Incarceration.” Annual Review of Criminology, 1:261–83. Retrieved February 28, 2019 (<https://doi.org/10.1146/annurev-criminol-032317-092513>)
- [2] Obasogie, Osagie K., Irene Headen, and Mahasin S Mujahid. 2017. “Race, Law, and Health Disparities: Toward a Critical Race Intervention.” Annual Review of Law and Social Science, 13.1: 313–329. Retrieved February 28, 2019 (<https://doi.org/10.1146/annurev-lawsocsci-110615-085002>).
- [3] Weiner, Matthew (director). 2016. “The Animals.” Orange is the New Black. Season 4, Episode 12. Netflix. Retrieved February 16, 2019 (<https://bit.ly/2IH8VpS>).
- [4] Bernstein, Adam (director). 2016. “Toast Can’t Never Be Bread Again.” Orange is the New Black. Season 4, Episode 13. Netflix. Retrieved February 16, 2019. (<https://bit.ly/2VqwqF5>).
- [5] Barlok, Abby E., "New Tools for Storytelling: Flexible Ethnicity and Adaptation in Comics & Television" (2017). Theses and Dissertations. 2505. <http://preserve.lehigh.edu/etd/2505>



Bhante Katukurunde Nanananda's Interpretation of Nibbana: Experience Without Boundary

Arjuna Jayawardena

Abstract— This research is an attempt to interpret how the early Buddhist teachings portray Nibbana and how this portrayal might be understood as a fitting conclusion to the Buddha's quest to overcome suffering. In particular, we have tried to shed light on what is meant by bhava-nirodha (cessation of existence), a common description of Nibbana, and how such a dictum might avoid annihilationist interpretations without, at the same time, leaning towards an eternalist interpretation, the two extremes the Buddha seeks to avoid. In the second section, we attempt to see how the Buddha instructed his disciples to abandon the arising of the self-perspective. We have relied heavily on Bhante Katukurunde Nanananda's analysis of the sutta-pitika as seen in a number of his books and most notably, in his Nibbana: The Mind Stilled series [1].

Nanananda, formerly a Pali lecturer, came under the guidance of Bhante Matara Sri Nanarama and was invited by the latter to deliver the sermons on Nibbana which would comprise the Nibbana: The Mind Stilled series [1]. Nanananda's interpretation is notable, first, in its disagreement with the commentarial tradition's understanding, and second, in its insistence of Nibbana being the cessation of existence while nevertheless avoiding an annihilationist point of view. The sermons also rely heavily



I. INTRODUCTION





on the early texts. For the most part, these sermons were met with much resistance for the very same reasons that they are notable (the commentarial tradition is held in very high esteem in Sri Lanka, where these sermons were delivered).

II. CESSATION OF EXISTENCE AND DEPENDENT ARISING

Nibbana is often defined as the cessation of existence, a claim that is met with much resistance and accused of representing a nihilistic worldview. We ordinarily perceive existence in terms of some essential being, and to conceive Nibbana as the destruction of that essence surely leads us to perceive the cessation of existence as annihilation. According to the Dhamma (the Buddha's teachings), however, we need to straighten our view in line with the way things are, namely, the law of dependent arising. According to this law, the independent existence of a thing is an unfounded presupposition in conflict with the way things are. Some think that the blissful experience of the cessation of existence is won only after death. This, however, goes against the 'here-and-now' quality of the Dhamma, according to which one need not wait for some future state in order to experience spiritual awakening. The Dhamma would have it that the cessation of existence occurs when craving, conceit, and views are made null and no longer go to concocting a prepared-but-apparent existence (or substantiality) and preparations are perceived simply as preparations, arising and passing according to their nature. Then all things are comparable to grass and twigs because they possess no inherent value.

At the center of the Buddha's teaching (Dhamma) is dependent arising [2]. Dependent arising is the 'relatedness of this to that' (idappaccayata) [2]. The relationship between any two consecutive links is a specific expression of that basic principle. Thus, that verse must signify what is meant by 'the relatedness of this to that'. Now this formula describes the structure of personal experience and in particular, how the concepts of (self)-existence, birth, decay, death, and dissatisfaction arise, according to the Buddha's understanding.

Buddha described dissatisfaction as dependently arising: The point of origin is the deluded belief (avijja) that it is possible to go against the three signs of existence, namely impermanence, unsatisfactoriness, and not-self. Preparations (sankharas) are made to take the current against the stream of reality, and that pushing of the current against the mainstream, as well as the tendency to do so, is discriminative consciousness (vinnana). That point of resistance is name-and-form. With the whirlpool, an abyss is formed, the functioning of which is comparable to the

six-sense bases (salyatana). How so? An abyss has been likened by the Buddha to painful feelings, feelings of emptiness and despair. The ordinary individual knows no escape from pain but sensual pleasures, and so, the six-sense bases are molded in order to quench the thirst (or craving; tanha) arising from painful feelings (vedana). This is [seemingly] done by the act of grasping (upadana) the surrounding flotsam and jetsam, which are comparable to the aggregates of grasping (pancupadanakkhanda). Consequently, the designation of a this-ness becomes possible; a show of existence (bhava) is put up. That is to say that a reference point and things referred to have arisen as consciousness pushes against the main stream. At this point, there are two forces opposing one another and this makes possible the designation of one thing as separate from the other. A 'this' has been born and, in line with the ever-changing nature of experience, is bound to decay and die. So here we have the Buddha's outline of life.

III. MINDFULNESS AND PEACE



When, with mindfulness, the relative designations of painful/ pleasant, internal external, and so on are seen to be ineffective, or, when the collectedness and calm of a trained mind watches how feelings, whether painful or pleasurable, arise only to pass away, then one realizes that the utter significance those feelings once held were actually branded onto them by a point of view, and that even that point of view was prepared –that it was the propped up separation in experience that made possible all such designations. Thus, the distinction between painful/ pleasant, internal/ external, and so on, falls away and the dualistic interplay between consciousness and its object lessens. When discrimination is undone, then one is truly alone because there are no others, and no self; there is no inside, and no outside. This consciousness is “indeed symbolic of the Arahant’s singularity, wholeness, aloofness and solitude” [1]. In that consciousness, there is no separation. This is a “solitude born of full integration” [1]; there is no alone because there is no separation and because there is no separation there is full integration.

Nanananda teaches that if the understanding that in the case of the Awakened ones, “what remains there, now, is the great ocean, undifferentiated and unique” is gained, then that fear of nihilism and annihilation will dissipate: the cessation of the whirlpool is no different than “inheriting [the] expansive great ocean. It is where a vortex ceases that the great ocean prevails unhindered. To give up the limitations of a vortex, is to inherit the limitless ocean... It is by giving up all that one becomes worthy of all [1]. This paradox is inherent in the term ‘Arahant’, which literally means ‘one who is worthy of gifts’ and refers to the one who has no attachments –who has let go of all. Nanananda adds that when the vortex of samsara ceases, one gains a vision of the “depth,immeasurability,andboundlessness of the great ocean. This line of reflection might even enable one to get a glimpse of an unworldly beauty in this philosophy of the void, which drives an unfounded fear into the minds of the worldlings” [1]. Voidness and essencelessness, though feared often, is in the Dhamma nothing but natural and limitless freedom. The concepts of existence, concurrent with





the concepts of birth, decay, and death, confine experience. Essencelessness is the beauty that tempts one to let go –to abandon grasping altogether. Grasping abandoned is the very gaining of freedom from grasping and all its consequent suffering. It is the realization that as-it- is, the norm of Nature is perfectly at ease and undisturbed.

Wisdom, in the Buddhist sense, is knowledge of emptiness and in particular, the emptiness of even consciousness. Even consciousness as discrimination is prepared. It is out of this ignorance that the awakened ones emerge, blooming like the louts, pure in fragrance and form. For the Buddha, it is such a sublime beauty that instills in the ordinary individual a fear of the cessation of existence.

IV. DISCUSSION AND CONCLUSION

We have presented here a vision of Nibbana, primarily according to Nanananda's interpretation of the early Buddhist canonical texts. In it, we have shown that dependent arising attempts to portray how the subject-object dichotomy arises in experience. It portrays the interaction between consciousness and its object as something that is prepared and inherently dualistic. From this perspective, consciousness in the ordinary sense is something that is prepared specifically to discriminate. For the Buddha, this preparation is the arising of the point of view which makes possible the designation of a this-ness. From it arises all concepts, which establish in experience the sense of separation and thing-ness. The Buddha goes on to highlight this experience as being prepared and made-up. He attempts to persuade the listener to abandon

this act of preparing through insight by highlighting its pivotal role in the arising of dissatisfaction. This can be seen in his instructions which ask to refrain from imagining in experience a subject or object apart from that bare experience. We then bring up various discourses, describing a form of consciousness wherein this subject-object dichotomy is absent which itself is claimed to be the end of suffering. In this consciousness, there are no objects ordinary to the world.

Nevertheless, there is still a sort of quasi-object –a knowing of Nibbana which supposedly does not involve any form of dualistic knowing. What is there is just the experience of unbifurcated experience and this itself is Nibbana. This is further described as the cessation of the sense-spheres and the end of the world. In the interpretation adopted, what is meant is the cessation of the bifurcation in experience which makes possible the measuring of the world. This is portrayed as an experience of wholeness and vivid serenity. In it, there is said to be no longing and no distress. It is in this way that we have attempted to portray what is meant by the cessation of existence.

In our interpretation, suffering is not limited to ordinary suffering or difficult experiences. It is, in its most fundamental meaning, the discomfort and dis-ease that is said to go along with a sense of separation in one's experience. For the Buddha, dissatisfaction arises only because there is a felt-sense of separation in experience that goes towards a sense of incompleteness or discontent. Thus, the cessation of this separation which is referred to as the cessation of existence is the abandoning of any sense of





incompleteness and discontent.

It would be interesting to compare this interpretation with a number of other Buddhist schools which seem to advance similar positions, such as the Dzogchen school of Tibetan Buddhism. Normally, these schools are thought to be in opposition but these oppositions are usually based on an entirely different perspective of the Theravada tradition than the one presented here. It would also be of interest to understand any similarities and/or differences between this presentation of Theravada Buddhism and other spiritual traditions which advance a non-dual perspective.



REFERENCES

- [1] Nananda, Katukurunde. Nibbana: The Mind Stilled. 1st ed. Nugegoda: Dharma Grantha Mudrana Bharaya, 2008. Print
- [2] Nananda. The Magic of the Mind: An Exposition of the Kalakarama Sutta. 2nd ed. Nugegoda: Dharma Grantha Mudrana Bharaya, 2007.
- [3] Bodhi and Nanamoli. The Connected Discourses of the Buddha: A Translation of the Samyutta Nikaya. 1st ed. Boston: Wisdom Publications, 2003.
- [4] Bodhi and Nanamoli. The Middle Length Discourses of the Buddha: A Translation of the Majjhima Nikaya. 3rd ed. Boston: Wisdom Publications, 1995.
- [5] Bodhi. The Numerical Discourses of the Buddha: A Complete Translation of the Anguttara Nikaya. 1st ed. Boston: Wisdom Publications, 2012.
- [6] Lopez Jr., D. S. (2001). The Story of Buddhism: A Concise Guide to Its History and Teachings. HarperOne
- [7] Author Last Name, Author First Initial. (Year of Publication). Title of the Book. Publisher.
- [8] Rahula, W. (1974). What the Buddha Taught. Grove Press.
- [9] Harvey, P. (2000). An Introduction to Buddhist Ethics. Cambridge Studies in Religious Traditions, 15(2), 155-171.
- [10] Conze, E. (1967). The Three Stages of Buddhist Meditation. Philosophy East and West, 17(2), 113-127.
- [11] Buswell, R. E., & Gimello, R. M. (n.d.). Paths to Liberation: The Mārga and Its Transformations in Buddhist Thought. Stanford University. <https://web.stanford.edu/group/SHR/4-2/text/buswell.html>
- [12] The Buddhist Review. (2021). Home. <https://tricycle.org/>





- [13]Williams, P. (2002). Theravāda Buddhism and the British Encounter: Religious, Missionary, and Colonial Experience in Nineteenth Century Sri Lanka. *Journal of Global Buddhism*, 3, 81-97.



Fecal Microbiome-Driven Subgroup Identification in an Alzheimer's Risk Cohort

Keneil Soni

A*bstract*– The gut microbiome has been linked to neurological disorders, including Alzheimer's disease (AD). However, a large-scale analysis comparing the fecal microbiomes of AD patients has yet to be conducted. In this study, I used Subgroup Identification (SGI), a new toolbox implemented in R, to investigate the gut microbiome of 246 individuals and to identify clusters of individuals with significant associations to clinical attributes, including AD diagnosis. Of these, 24 individuals had dementia-AD, seven had MCI-AD, one had MCI-other, two were impaired-other, and the remaining 212 were cognitively normal. After hierarchical clustering of the microbiome, I assessed each cluster pair to determine the clinical attributes significantly correlated with the two clusters (at a 25% family-wise error rate). In my analysis, I found subgroups of individuals based on differences in Bristol type (adj. $p=0.038$; adj. $p=0.044$;

adj. $p=0.052$), age (adj. $p=0.000033$), sex (adj. $p=0.19$) and diagnosis (adj. $p=0.052$). Additionally, I found that an association may exist between AD diagnosis and Bristol type since both of those clinical attributes were significant in dividing the same subgroup. Furthermore, an association may exist between the microbiome, AD, age, sex, and Bristol type since diagnosis and Bristol type were significantly correlated with subgroups nested below a subgroup correlated with age and sex. In future studies, integration of the metabolome with the microbiome would enable identification of specific metabolic pathways connecting the microbiome to AD subgroups.

References

1. Chen, Y., Xu, J., & Chen, Y. (2021). Regulation of Neurotransmitters by the Gut Microbiota and Effects on Cognition





- in Neurological Disorders. *Nutrients*, 13(6), 2099. <https://doi.org/10.3390/nu13062099>
2. Dahlin, M., & Prast-Nielsen, S. (2019). The gut microbiome and epilepsy. *EBioMedicine*, 44, 741–746. <https://doi.org/10.1016/j.ebiom.2019.05.024>
 3. Fetissov, S. O., Averina, O. V., & Danilenko, V. N. (2019). Neuropeptides in the microbiota-brain axis and feeding behavior in autism spectrum disorder. *Nutrition*, 61, 43–48. <https://doi.org/10.1016/j.nut.2018.10.030>
 4. Sampson, T. R., Debelius, J. W., Thron, T., Janssen, S., Shastri, G. G., Ilhan, Z. E., Challis, C., Schretter, C. E., Rocha, S., Gradinaru, V., Chesselet, M.-F., Keshavarzian, A., Shannon, K. M., Krajmalnik-Brown, R., Wittung-Stafshede, P., Knight, R., & Mazmanian, S. K. (2016). Gut Microbiota Regulate Motor Deficits and Neuroinflammation in a Model of Parkinson's Disease. *Cell*, 167(6), 1469–1480.e12. <https://doi.org/10.1016/j.cell.2016.11.018>
 5. Sochocka, M., Donskow-Łysoniewska, K., Diniz, B. S., Kurpas, D., Brzozowska, E., & Leszek, J. (2019). The Gut Microbiome Alterations and Inflammation-Driven Pathogenesis of Alzheimer's Disease—A Critical Review. *Molecular Neurobiology*, 56(3), 1841–1851. <https://doi.org/10.1007/s12035-018-1188-4>
 6. Valdes, A. M., Walter, J., Segal, E., & Spector, T. D. (2018). Role of the gut microbiota in nutrition and health. *BMJ*, 361, k2179. <https://doi.org/10.1136/bmj.k2179>
 7. Fung, T. C., Olson, C. A., & Hsiao, E. Y. (2017). Interactions between the microbiota, immune and nervous systems in health and disease. *Nature Neuroscience*, 20(2), 145–155. <https://doi.org/10.1038/nn.4476>
 8. Sampson, T. R., & Mazmanian, S. K. (2015). Control of Brain Development, Function, and Behavior by the Microbiome. *Cell Host & Microbe*, 17(5), 565–576. <https://doi.org/10.1016/j.chom.2015.04.011>
 9. Carabotti, M., Scirocco, A., Maselli, M. A., & Severi, C. (2015). The gut-brain axis: Interactions between enteric microbiota, central and enteric nervous systems. *Annals of Gastroenterology : Quarterly Publication of the Hellenic Society of Gastroenterology*, 28(2), 203–209. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4367209/>
 10. Butler, M. I., Mörk, S., Sandhu, K. V., Cryan, J. F., & Dinan, T. G. (2019). The Gut Microbiome and Mental Health: What Should We Tell Our Patients?: Le microbiote Intestinal et la Santé Mentale : que Devrions-Nous dire à nos Patients? *Canadian Journal of Psychiatry. Revue Canadienne de Psychiatrie*, 64(11), 747–760. <https://doi.org/10.1177/0706743719874168>
 11. Shreiner, A. B., Kao, J. Y., & Young, V. B. (2015). The gut microbiome in health and in disease. *Current Opinion in Gastroenterology*, 31(1), 69–75. <https://doi.org/10.1097/MOG.0000000000000139>
 12. Vogt, N. M., Kerby, R. L., Dill-McFarland,





- K. A., Harding, S. J., Merluzzi, A. P., Johnson, S. C., Carlsson, C. M., Asthana, S., Zetterberg, H., Blennow, K., Bendlin, B. B., & Rey, F. E. (2017). Gut microbiome alterations in Alzheimer's disease. *Scientific Reports*, 7(1), 13537. <https://doi.org/10.1038/s41598-017-13601-y> org/10.1126/science.1237439
13. Goodrich, J. K., Waters, J. L., Poole, A. C., Sutter, J. L., Koren, O., Blekhman, R., Beaumont, M., Van Treuren, W., Knight, R., Bell, J. T., Spector, T. D., Clark, A. G., & Ley, R. E. (2014). Human Genetics Shape the Gut Microbiome. *Cell*, 159(4), 789–799. <https://doi.org/10.1016/j.cell.2014.09.053>
 14. Rothschild, D., Weissbrod, O., Barkan, E., Kurilshikov, A., Korem, T., Zeevi, D., Costea, P. I., Godneva, A., Kalka, I. N., Bar, N., Shilo, S., Lador, D., Vila, A. V., Zmora, N., Pevsner-Fischer, M., Israeli, D., Kosower, N., Malka, G., Wolf, B. C., ... Segal, E. (2018). Environment dominates over host genetics in shaping human gut microbiota. *Nature*, 555(7695), 210–215. <https://doi.org/10.1038/nature25973>
 15. Ursell, L. K., Metcalf, J. L., Parfrey, L. W., & Knight, R. (2012). Defining the Human Microbiome. *Nutrition Reviews*, 70(Suppl 1), S38–S44. <https://doi.org/10.1111/j.1753-4887.2012.00493.x>
 16. Faith, J. J., Guruge, J. L., Charbonneau, M., Subramanian, S., Seedorf, H., Goodman, A. L., Clemente, J. C., Knight, R., Heath, A. C., Leibel, R. L., Rosenbaum, M., & Gordon, J. I. (2013). The long-term stability of the human gut microbiota. *Science (New York, N.Y.)*, 341(6141), 1237439. <https://doi.org/10.1126/science.1237439>





Evaluating the Volatility and Tail Risk Reduction of Mean-Variance Portfolios

Imran Gangat

Abstract— Since the 2008 financial crisis, research in quantitative finance has been focused on forecasting risk to protect investors and institutions from large swings in the market. While previous academic research has mainly explored the uses of historical stock prices to forecast volatility, little research has been done in using financial derivatives to forecast stock price movements. This research focuses on integrating option prices into the Markowitz mean-variance model to provide an improved computational framework for investors to build optimized portfolios. Risk-neutral probability distributions, which were derived from sets of option prices, were utilized to construct optimal portfolios of 30 equities from 2018. For each month during 2018, model-free implied volatilities of the constituent stocks in the portfolio and the implied correlations between the stocks were calculated. A covariance matrix could

then be constructed using implied volatility and implied correlation matrices as inputs, allowing for portfolios to be optimized. The sample portfolios using implied volatility reduced realized volatility by 0.38% when compared to portfolios that used historical stock returns, and these portfolios also showed a reduction in realized tail risk. These findings show that options have significant potential for investors to construct portfolios with lower risk.

References

1. Britten-Jones, M., & Neuberger, A. (2000). Option prices, implied price processes, and stochastic volatility. *The Journal of Finance*, 55(2), 839–866.
2. Jiang, G. J., & Tian, Y. S. (2005). The model-free implied volatility and its information content.





3. Kostakis, A., Panigirtzoglou, N., & Skiadopoulos, G. (2011). Market timing with optionimplied distributions: A forward-looking approach. *Management Science*, 57(7), 1231–1249.
4. Numpacharoen, K., & Numpacharoen, N. (2013). Estimating realistic implied correlation matrix from option prices. *Journal of Mathematical Finance*, 3(4), 401.
5. Quaranta, A. G., & Zaffaroni, A. (2008). Robust optimization of conditional value at risk and portfolio selection. *Journal of Banking & Finance*, 32(10), 2046–2056.
6. Rockafellar, R. T., Uryasev, S., et al. (2000). Optimization of conditional value-at-risk. *Journal of risk*, 2, 21–42.





Relations between Social Determinants of Health and Health Outcomes

Lin Jing Liu

Abstract— This study intends to investigate the relationship between social determinants of health (SDOH) and health outcomes. Nine SDOH are examined, including social, economic, and environmental factors. Nine health outcomes are also examined, which are selected with the intention of emphasizing prevalent diseases in the U.S. population. Data utilized in this study is retrieved from the National Health and Nutrition Examination Survey, and data analysis is done in Excel through logistic regression models. The study population is limited to adults who are 20 years and older. A binary logistic regression model is developed for assessing the relationship between each SDOH and health outcome. From the model, coefficients for the intercept and the independent variable are utilized to evaluate the probability of obtaining a poor health outcome. Other statistical measures like the Wald statistic, odds ratio, chi-

square test, and p-value are employed to further assess the significance of the logistic regression model developed. Overall, the results show that as the SDOH improve in terms of greater quality or magnitude (applicable for two independent variables), there is a decreasing probability of obtaining poor health outcomes. Thus, the relationship between SDOH and better health outcomes is proven with evidence. This suggests the need to invest in public policies to improve social, economic, and environmental conditions for those are at risk of obtaining diseases.

References

1. Braveman P, Egerter S, Williams DR. The Social Determinants of Health: Coming of Age. *Annu Rev Public Health*. 2011; 32: 381-98. doi:10.1146/annurev-publhealth-031210-101218





2. Braveman P, Woolf SH. Where Health Disparities Begin: The Role of Social and Economic Determinants – And Why Current Policies May Make Matters Worse. *Health Affairs*. 2011; 30(10): 1852-1859. doi:10.1377/1. 2011.0685
3. Braveman P, Gottlieb L. The Social Determinants of Health: It's Time to Consider the Causes of the Causes. *Public Health Reports*. 2014; 129 (1_suppl2): 19-31. doi:10.1177/00333549141291S206
4. Seligman HK, Laraia BA, Kushel MB. Food Insecurity is Associated with Chronic Disease Among Low-Income NHANES Participants. *The Journal of Nutrition*. 2010; 140(2): 304-310. doi:10.3945/jn.109.112573
5. Bradley EH, Canavan M, Rogan E, et al. Variation in Health Outcomes: The Role of Spending on Social Services, Public Health, and Health Care, 2000-09. *Health Affairs*. 2016; 35(5): 760-768. doi:10.1377/hlthaff.2015.0814
6. NHANES 2015-2016. Cdc.org. <https://wwwn.cdc.gov/nchs/nhanes/continuousnhanes/default.aspx?BeginYear=2015>. Updated August 4, 2020. Accessed November 18, 2020.
7. Bewick V, Cheek L, Ball J. Statistics Review 14: Logistic Regression. *Critical Care*. 2005; 9(1): 112-118. doi:10.1186/cc3045
8. Kroenke K, Spitzer RL, Williams JBW. Validity of a Brief Depression Severity Measure. *J Gen Intern Med*. 2001; 16(9): 606-613. doi:10.1046/j.1525-1497.2001.016009606.x





Fractal Designs Using Numerical and Computational Modeling

Claire Choi

A*bstract*– Studies on the design patterns and rendering techniques require adequate computational and mathematical algorithms to develop recursive images. Obtained design patterns are useful since they can be reusable in the commonly occurring problems in graphic, industrial, and computer design. Due to the iterative nature of product design progression in the modern design process, refined simple units and terms with fractal geometry are essential. This paper studied the recursion technique that is possible to solve complex and diverse design or space-filling problems. Concise programs were developed and applied to create artistic images in this project. Using alternative algorithms employing rotations and translations of the proposed starter geometries, path-efficient codes were developed and used to create a design. The presented alternative curves were able to generate diverse space-filling

curves(SFCs) as well as non-space-filling curves. We assume there are modified methods to construct SFC using simpler and more efficient algorithms. We hypothesize that there are alternative starters that can be efficiently used in SFC, which are used for the basic units in constructing complex artistic and geometrical patterns. We used the control target as a regular space-filling curve, the Hilbert curve that never self-intersects. We hypothesize that presented curves forming self-intersects can be an SFC(Space Filling Curve) that fills out a domain similarly to HFC. To test the possibility, we developed HFC analogs to determine if they would produce SFC or how fast they could fill out the plane's 2D or 3D domain regions or volume when the recursion increases.

References

1. "The Fractal Geometry of Nature" by Benoit B. Mandelbrot





2. "Chaos and Fractals: New Frontiers of Science" by Heinz-Otto Peitgen, Hartmut Jürgens, and Dietmar Saupe
3. "Fractals: A Very Short Introduction" by Kenneth Falconer
4. Bourges, Pascale. "Chapitre 1: fractales", Fractales et chaos. Accessed: 9 February 2019.
5. Moon, B.; Jagadish, H.V.; Faloutsos, C.; Saltz, J.H. (2001), "Analysis of the clustering properties of the Hilbert space-filling curve", IEEE Transactions on Knowledge and Data Engineering, 13 (1): 124–141, CiteSeerX 10.1.1.552.6697, doi:10.1109/69.908985.
6. Thiadmer Riemersma (1998-12-01). "A Balanced Dithering Technique". C/C++ User's Journal. Dr. Dobb's.
7. I. Kamel, C. Faloutsos, Hilbert R-tree: An improved R-tree using fractals, in: Proceedings of the 20th International Conference on Very Large Data Bases, Morgan Kaufmann Publishers Inc., San Francisco, CA, USA, 1994, pp. 500–509.
8. Eavis, T.; Cueva, D. (2007). A Hilbert space compression architecture for data warehouse environments. Lecture Notes in Computer Science. 4654. pp. 1–12. doi:10.1007/978-3-540-74553-2_1. ISBN 978-3-540-74552-5.
9. Lemire, Daniel; Kaser, Owen (2011). "Reordering Columns for Smaller Indexes". Information Sciences. 181 (12): 2550–2570. arXiv:0909.1346. doi:10.1016/j.ins.2011.02.002. S2CID 15253857.
10. A. Ansari and A. Fineberg. Image data compression and ordering using peano scan and lot. IEEE Transactions on Consumer Electronics, 38(3):436–445, August 1992.
11. T. Cormen, C.E. Leiserson, and R.L. Rivest. Introduction to Algorithms. McGraw-Hill book Company, 1990. submitted to EUROGRAPHICS 2000.
12. Space-Filling Curves (Springer-Verlag), Sagan, Hans (1994), ISBN-13: 978-0387942650
13. Peano, G. (1890), "Sur une courbe, qui remplit toute une aire plane", Mathematische Annalen (in French), 36 (1): 157–160,



Analysis of Substance Abuse and Impacts

Duong Dai Dinh and John Luc

A**bstract**— In 2003, Hon Lik, a Chinese pharmacist and inventor, created what would become the first commercially successful e-cigarette [1]. Hon Lik's invention quickly swept across the continent, gaining popularity and ultimately being introduced to the European market in April 2006. From Europe, it was a quick hop across the pond to the United States. This new, "safe" form of smoking quickly spread throughout the states. This wave quickly formed a new, highly profitable industry. With such a rapid rise to popularity, governing bodies such as the Food and Drug Administration and Federal Trade Commission have not yet regulated this industry effectively. Although, steps are being taken to do so, the damage has been done. The vaping industry has successfully targeted the youth population, creating high rates of teen and adolescent addiction. Similar to the vaping epidemic plaguing the United States, in 2011, there

were approximately 20.6 million people in the United States over the age of 12 with an addiction ranging from alcohol to inhalants and hallucinogens [2]. This number has only grown in recent years. This is why it is paramount to be able to model and predict which communities are most at risk and assess the true cost of addiction. Through complex mathematical modelling and analysis, the ability to assess the prevalence and impact of alcohol, nicotine, marijuana, and nonprescription drugs is available today.

References

1. Historical Timeline of Electronic Cigarettes. (2018, October 18). Retrieved from <http://www.casaa.org/historical-timeline-of-electronic-cigarettes/>





2. Addiction Statistics - Facts on Drug and Alcohol Addiction. (n.d.). Retrieved from <https://www.addictioncenter.com/addiction/addiction-statistics/>
3. Americans Who Smoke Marijuana by Income 2017 | Statistic. (n.d.). Retrieved from <https://www.statista.com/statistics/737896/share-americans-income-smokes-marijuana/>
4. Cook, C. (2018, July 26). How High Are Cigarette Tax Rates in Your State? Retrieved from <https://taxfoundation.org/state-cigarette-tax-rates-2018/>
5. Drug Scheduling. (n.d.). Retrieved from <https://www.dea.gov/drug-scheduling>
6. Historical Timeline of Electronic Cigarettes. (2018, October 18). Retrieved from <http://www.casaa.org/historical-timeline-of-electronic-cigarettes/>
7. McCabe, S. E., PhD, MA. (2008, May 13). Race/Ethnicity and Gender Differences in Drug Use and Abuse. Retrieved March 2, 2019, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2377408/>
8. FDA. (2018, June). Youth Tobacco Use in the U.S. Retrieved March 2, 2019, from <https://www.fda.gov/downloads/TobaccoProducts/PublicHealthEducation/ProtectingKidsfromTobacco/UCM569880.pdf>
9. Marijuana Street Prices: How Much Should You Pay For Weed? (n.d.). Retrieved from <https://addictionresource.com/drugs/marijuana/marijuana-street-prices/>
10. Motor Vehicle Safety. (2017, June 16). Retrieved from https://www.cdc.gov/motorvehiclesafety/impaired_driving/impaired-driv_factsheet.html
11. National Institute on Drug Abuse. (n.d.). What is the scope of tobacco use and its cost to society? Retrieved from <https://www.drugabuse.gov/publications/research-reports/tobacco-nicotine-e-cigarettes/what-scope-tobacco-use-its-cost-to-society>
12. The Price Paid for Automobile Accidents and Injuries. (n.d.). Retrieved from <http://www.tavss.com/library/va-nc-lawyer-economic-and-comprehensive-auto-accident-costs.cfm>
13. Thomas, S. (n.d.). Statistics on Drug Addiction. Retrieved from <https://americanaddictioncenters.org/rehab-guide/addiction-statistics>



No-Self and Mindfulness as Tools for Liberatory Activism

Sarah Kasha

Absract—It may seem counterintuitive to suggest that the Zen Buddhist doctrines of no-self and mindfulness might be effective tools for activism, considering that no-self completely undermines the Western conception of moral agency, and mindfulness promotes an awareness and acceptance of the present and detachment from desire for change. If activism is an organized effort to help others and ourselves in the face of injustice, can that really be achieved without a robust notion of the self and a powerful desire for change?

In this paper, I will argue that together, mindfulness and no-self can create a basis for better activism by addressing its central problems on personal, interpersonal, and organizational levels. First, I will argue that the doctrine of no-self, far from limiting

agency, promotes extended empathy, self-awareness, self-love, and self-care. Second, I will argue that the doctrine of mindfulness both resolves some of the organization-related tensions between no-self and activism and provides additional tools for effective activism, as mindfulness promotes embodied care and right action. In this way, the incorporation of no-self and mindfulness into activism creates a comprehensive new approach to activism that is equipped to combat its main issues.

REFERENCES

- [1] Butnor, Ashby. 2014. "Dogen, Feminism, and the Embodied Practice of Care". In *Asian and Feminist Philosophies in Dialogue*, ed. Jennifer McWeeny and Ashby Butnor.



- [2] Kalmanson, Leah. "Buddhism and bell hooks: Liberatory Aesthetics and the Radical Subjectivity of No-Self." *Hypatia* Vol. 27, No. 4 (2012): 810–827.
- [3] <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1527-2001.2011.01224.x>
- [4] Tanahashi Kazuaki, trans. 1985. *Moon in a dewdrop: Writings of Zen master Dōgen*. New York: North Point.
- [5] Uebel, Michael, and Shorkey, Clayton. "Mindfulness and Engaged Buddhism: Implications for a Generalist Macro Social Work Practice". In *Mindfulness and Acceptance in Social Work: Evidence-Based Interventions and Emerging Applications*, ed. Matthew S. Boone. Oakland, CA: New Harbinger Publications, 2014. 215-234.
- [6] Warren, Henry Clarke. 2005. "There is no ego". *Buddhism in Translations*, 129-146. New York: Cosimo Classics.





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