Viral Entanglements: Pandemic, Planetarity and New Materialist Response

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Introduction

New Materialism is an interdisciplinary and political theoretical approach that seeks to denaturalize anthropocentric power relations. As a revivalist materialist inquiry, it challenges the prominence given to language, culture and its representation in various theoretical articulations, while exploring new discursive practices, based on material and somatic realities. It is a polycentric perspective derived from feminist scholarship, philosophy, science studies and cultural theory which engages with the dynamics of materialization and its entanglements on the ontological plane. As a school of philosophy, it discursively destabilizes the transcendental humanist thought which haunts the cultural theory post the linguistic turn. As Claire Colebrook points out, new materialism allows for even language to emerge as a "living force" rather than "a fixed, determining, and inhuman grid imposed upon life" (Colebrook 64). New materialist thought prioritizes matter over any form of anthropocentric system such as language and believes in an active, constantly changing and growing understanding of matter; positing that 'matter becomes' rather than 'matter is'. In this enactment of 'becoming', the human species is no longer centrally located but instead, placed in an environment in which various material agents manifest their varied agentic capacities and therefore reconfigure and broaden the field of unintended or unanticipated effects in a considerable manner. New materialist philosophy also challenges the subjectoriented view of political agency and explores the power of matter— nonhuman and even nonorganic in framing the socio-political structures. Jane Bennett explains, "Thing-power" as "a force exercised on that which is not specifically human (or even organic) upon humans" (Bennett, The Force of Things, 351). In the phenomenal experience of the environment, it often transpires that "objects appear more vividly as things, that is, as entities not entirely reducible to the contexts in which (human) subjects set them, never entirely exhausted by their semiotics" (2004 351). The current COVID-19 pandemic has emerged as one such instance of "thing- power" which continuously exasperate all models of semiotic cognition and political manoeuvring by its irreducible mutability as a viral agent. The paper will attempt a new materialist reading of the pandemic and will explore how virus as a nonhuman agent affects the environment as it has "an inclination to make connections and form networks of relations with varying degrees of stability" (2004 354). This essay will explore how virus as our 'non-human planet mate' affect our medical, cultural, political and philosophical structures. How viral pandemic pushes the human race towards seeking a planetary response, and as N. Katherine Hayles ponders what are the 'new thoughts' that pandemic incites us to think?

The present pandemic has enormously changed the way humans travel, their modes of social contacts, use of public recreation resources, and access to natural environments. COVID 19 and the precautionary lockdowns accompanying it has permanently reshaped the economic and social reality with rampant unemployment and continuous shrinking of the world economy. It is then imperative to ponder how the nonhuman viral entity has come to define and alter the established structures and notions of capitalist and anthropocentric systems around the globe. Conversely, attention should also be paid to various ways in which capitalist structures have utilized and exploited the virus. The viral pandemic has led to a dilution of democratic structures as some governments are using the COVID 19 as a pretext to grant "themselves more expansive powers than warranted by the health crisis, with insufficient oversight mechanisms, and using their expanded authority to crack down on opposition and tighten their grip on power" (Brown np). There has been a steady rise in the executive powers of various governments and federal states are getting increasingly centralized in the wake of

the pandemic. There has also emerged from the geopolitical context a new asset— the COVID 19 vaccine. Like the arms race and space race of the cold war era, the newly unleashed vaccine race is being used to determine the pecking order of the world powers. COVID 19 and the ensuing fierce struggle for the acquisition of vaccines has also highlighted the fact that increasingly, scientific R and D, industrial capacity and non-state actors are shaping the global order. Such a geopolitical situation that supports increased corporate involvement in health care denies equitable access to Covid-19 drugs and vaccines. Expectedly, the pandemic has also led to an intensification of the poverty levels and has dramatically increased inequality. The viral pandemic and the geopolitical response to it demonstrate that the non-human and humans share a thick mesh of intra-actions that are not essentially disembodied. Intra-action— a term coined by Karen Barad, comprehends agency as not an essential property of an individual or human to be exercised, but as a "dynamism of forces" (Barad 141) in which all designated 'things' are continually substituting and deflecting, influencing and working inseparably. The intra-active nature of the calamity is discernable as human and nonhuman agencies are enmeshed in such precarious situations and have perpetuated vulnerability.

Zoonotic Pandemics and inter-species interactions

The current state of dishevel and disenfranchisement is due to the viral pandemic and the socio-political response to it, and in recent times, there has been a proliferation of such viral pandemics. With the appearance of HIV in 1981 through hunting and consumption of chimpanzee meat, millions of people across the globe have succumbed to AIDS (Ryu 289). Apart from AIDS 2002 SARS coronavirus epidemic, the 2009 H1N1 virus (Swine flu), the 2012 MERS coronavirus epidemic, the 2014 H5 virus bird flu, and the 2015 Zika virus epidemic, and the Ebola virus which like COVID-19 emerged from a bat reservoir in 1976

and took the form of epidemic in 2014, have ravaged the human society in recent times (Ryu 289).

It is due to these pandemics and the resultant death and economic upheaval that 'virus' as critters acquire a very frightening image in popular imagination and discourse. Virus as a parasite has come to signify in a metaphorical sense, an anomaly. They are always considered as infection inducing and disease spreading. But not all viruses are harmful to their hosts, and some provide essential health benefits to their hosts through their mutations. Norman McLeod notes regarding viruses, "Less than one percent are known to be pathogenic, but many more are known to be symbiotic (which means they assist the host), mutualistic (which means both host and virus benefit from the association), or benign (which means we don't know what they do)" (McLeod 49). The human-virus symbiosis is a biological instance of symbiosis which endorses new materialism's view regarding the agency where 'agency' is not an attribute of something or someone; rather it is the process of cause and 'effect in enactment'. Agency is the ability to "make a difference, produce effects and affects, alter the course of events by their action" (Coole 453). But as Barad opines, such agency can never be influenced upon one pre-existing entity by another. She proposes "agential realism" as an ontological framework to understand the working of intra-active agency as "a cooperative force that brings entangled materialities into being through their relationship" (Barad 26). For her, "agential realism" is an "epistemological-ontologicalethical framework that provides an understanding of the role of human and nonhuman" (Ibid). Such a framework functions through an 'ethics of responsibility' and symbiosis as an instance of such intra-action must function within such ethical bind so that the symbiosis doesn't get exploited by the participants. In medical science, there are many such instances of a symbiotic relationship between humans and viruses. For example, bacteriophages (or "phages") (Roberts 21) are a particular strain of viruses that infect and destroy specific bacteria. Located in the mucus lining of the digestive, respiratory and reproductive tracts of the human body, they are essential for the survival of the species (Roberts 21). Recent research by Barbara Maciejewska and others suggests that the virus, the phages present in the mucus collaborate with the human immune system in protecting the human body from invading bacteria. Biomedical research has catalogued certain phages that are greatly effective in treating dysentery, sepsis caused by *Staphylococcus aureus*, salmonella infections and bacterial skin infections. In an age in which proliferation of antibiotics and non-prescribed use of them, have resulted in the evolution of superbugs - bacterial strains which have a great degree of resistance to anti-biotic drugs, phages can be developed as an effective alternative to drugs, providing a biotic solution to bacterial infections (Maciejewska 2564).

In her celebrated work, *Symbiotic Planet: A New Look at Evolution* (1998), biologist Lynn Margulis rethinks the common notion that viruses in a generic sense are mere harbingers of disease and death. She argues that while viruses are undeniably infectious and are fast-spreading diseases, they are also "sources of evolutionary variation" (Margulis 64) and symbiotic change. It won't be farfetched to claim that human beings are composed of viruses to a great extent as about forty-five percent of the human genome consists of sequences that belonged to retroviruses, as viruses inhabit living organisms including humans and transform their genetic make-up (Margulis 64). Margulis sums up the human virus symbiotic connection in her famous pronouncement "We can no more be cured of our viruses than we can be relieved of our brains' frontal lobes: we are our viruses" (Margulis 64). They are the most frequent organism on earth and they form highly complex and vast global super bio-system which parallel and contest human global systems. Even as they are the most numerous of life forms forming their own sphere of influence, which biologist Curtis Suttle termed as 'virosophere'; they are as McLeod observes, "one of the least understood" (McLeod 49) life forms. Viruses are everywhere and are primordial beings and they make us

think and generate in N. Katherine Hayles' words, "new kinds of origin stories . . . about the emergence of life on earth" (Hayles 70).

Viruses and microbes are agents not merely of death, but also of bio-genetic and ontological planetary transformation. Viral pandemics in particular have been instrumental in shaping the course of cultural discourse throughout human history. This is particularly true of the current COVID 19 virus which has affected human culture, politics and economics worldwide. It is a viral entity as well as a meme. It is being replicated and transmitted both at a genetic as well as cultural level. While as a biotic agent it has claimed millions of lives on the cultural front it has generated a space of isolation and has increasingly mandated the curtailment of individual and in some instances the legal rights of citizens. The virus reminds us of biomedical-political apprehensions about non-human matters. The viral entity as an unfathomable 'other' haunt the collective consciousness of the society. It has drastically reformulated the idea of public space and the autonomy of the individual in such spaces and has increased surveillance of the "non spaces" such as hotels, modes of commutations, and transit points such as train stations and airports. In an era in which the fear of contamination and infection looms large, the virus has effectively transformed the interpersonal tactile exchanges and has essentially reconfigured the performance of intimacy. It is interesting to note that in the recent Tokyo Olympics 2020, beds made up of cardboards were installed to deter the athletes from being sexually intimate in the game village. The present-day urban planning and administration are all being executed, keeping the pandemic condition in context. In regards to the effect of the pandemic on cultural and societal structures, McLeod makes an observation that "unlike our body's immunological reactions, we are in control of how our societies react to this and future infections" (McLeod 51). It is within the realm of the human capacity to observe the modus operandi of the infection and institute structures that will distinguish the threats and will ascertain and mitigate the harmful societal responses

(trans-migration, rumour-mongering, hyper-policing) to this as well as the future pandemics and other such events which are holistically environmental in nature. In a sense, the viral reality has become a cursor for determining global policy and polity. Viral pandemic however is infinitely pluralistic in its infliction and so are the varied socio-political responses; they function beyond the scope of any exclusively rigid empirical institution. New materialism as an epistemic institution can help formulate the ethical template through which political responsibility can be dispensed across a wide spectrum of agents. There is a need to be attentive to the pitfall of absolving humans of responsibility while concentrating on the material reality of the pandemic. There is a need to identify spaces where 'hard power' is functional and is perpetuating inequality while acknowledging that the nonhuman agent like COVID 19 can make such injustice acutely manifest. There is a need to identify how such precarious events like pandemics make the minorities and oppressed identities more vulnerable.

Planetary pandemic and planetary health

The viral pandemic is essentially planetary as it exceeds the constraints of the bio-geo-political expanse of the global and the human. The planetary, in this context, functions as a theoretical—non-anthropocentric and relational—concept and category of critique which Dipesh Chakrabarty calls "habitability," an idea that privileges "life, complex, multicellular life, in general, and what makes that, not humans alone, sustainable" (Chakrabarty, *The Climate of History*, 20). The planetary as Chakrabarty points out, moves towards planet politics rather than global politics and therefore includes the nonhuman agents too. The planetary politics is intra-active as it "is rooted in a combination of partly overlapping worlds and partly unknowable worlds. In each of these worlds, there are ways to understand relationships with nature differently, but these cannot be stipulated in a single language, nor made fully commensurable in a single frame" (Youatt 87). Planetarity in rejecting the

insecurity of anthropocentrism and its singular view of 'political agency' echoes RosiBraidotti's notion of "political subjectivity" which can "register nonhuman forms of influence and activity. Such political stance can bring "nonhumans into focus as relevant 'subjects' of ethics and politics" (Braidotti 31). The viral surge is a planetary event, as it transgresses multiple boundaries, including the human and the nonhuman, and constitutes, as William Connolly's notes, volatile, self-organizing "temporal force fields" that "impinge on each other and human life in various ways" (2021 4). The effects of the planetary events and the capitalist/anthropocentric response to them must be encountered simultaneously. What emerges from such encounters, which forges alliances across disciplines (political, medical, geological, anthropological and biological studies) is a precarious entanglement. The very precarious nature of this encounter helps situate man in a less assured position in evolutionary history and thus allows for a non-anthropocentric narrative of life and ecology to emerge. Ironically, if the proper sequence of causality of the current pandemic is studied then it emerges that the human beings acted as the "amplifiers of a virus whose host reservoir may have been some bats in China for millions of years" (Chakrabarty, An Era of Pandemics, np). This holds for most of the pandemics which broke out in the last century and the present one; most of them from AIDS to Zica virus are zoonotic outbreaks, passed on from other organisms to humans through consumption of meat. The inter-species viral transmissions do shatter the notion of human exclusivism, central to anthropocentric world view but it also at another level points towards our persisting anthropocentric attitude toward nonhuman animals, which Richard Ryder terms as "speciesism": "human discrimination or exploitation against members of other species" (Ryder 02). The manifestation of most of these epidemics are results of capitalist ecoterrorism, either in form of poaching and consumption of exotic and endangered species or through selective breeding and narrowing of the gene pools of farm animals. In this light, any discourse of counter-response to pandemic must develop a

planet-oriented scalarity and meditate upon the planetary health at large. William Connolly points towards the ironic lack in Anthropocene for it "reveals dramatically the insufficiencies of human exceptionalism, sociocentrism and cultural internalism" (Connolly 30). It is no coincidence that the consolidation of Anthropocene with the advancement of agricultural society coincided with the first outbreaks of pandemics in the Neolithic age, 12,000 years ago. In present temporality too the exponential growth of human population and the unsustainable growth which capitalist enterprises initiate have helped in the spread and reach of viral pandemics. Chakraborty notes that the "Great Acceleration" of the global consumption and production system since the 1950s, with unchecked and uncontrolled exploitation of natural resources, has greatly skewed the delicate ecological balance, at the same time it has led to the spread of vector-borne diseases at an accelerated rate (2020, np.). The increased consumption and exploitation of ecological spheres and the mobility provided by the modern transportation system however have enabled the viral spread at a greater rate into farther spaces.

David Morens in his research on the relationship between the surge of pandemic and human action, notes that human is the ultimate cause of pandemic; humans as species continue on their path of deforestation, intensive agriculture, rampant urbanization and ecological disruption, and they enable zoonotic viral exchange through precarious human-nonhuman animal interactions. It is human caused ecological disruptions that are bringing pathogens in close contact with them, and human technology, ease of mobility and globalization and global networks of transits are providing the pathogens with the avenues of spreading at an accelerated rate. This makes the pandemic a manifestation of globalization which is identified as "Great Acceleration" – "the exponential increase, since the 1950s, in all parameters of growth of human presence on the planet, of economies, of travel, of population

numbers, of greenhouse gas emissions, of human consumption, of human mobility" (2020, np.).

As Bruno Latour says in his conversation with Dipesh Chakraborty in "The Global Reveals the Planetary": "Without the global, we would not have discovered the planetary" (2021 207). Thus, the viral pandemics not only point towards the history of increased consumption, exploitation of biosphere and non-human organisms, leading to zoonotic pandemics, but they are also markers of the deep history of evolution in this planet Earth. The essential characteristic which distinguishes biotic matter from abiotic is the propensity to replicate itself. Richard Dawkins calls such a molecule a Replicator which "may not necessarily have been the biggest or the most complex molecule around, but it had the extraordinary property of being able to create copies of itself" (Dawkins 15). Viruses as critters have fine-tuned the act of replication, they proliferate through mutation of their host and self-replication. They "consist of pure DNA (or a related self-replicating molecule) surrounded by a protein jacket. They are all parasitic" (Dawkins 15). While in multi-cellular beings like human beings the genetic matter travels through eggs and sperms while the viral material travels abiotically through vectors like wind and water and through mutation of the host's genetic material. The human virus clash is the conflict between the two of the most successful yet divergent species and is one of the crucial points in the history of the evolution of life on earth. It is an evolutionary conflict between two different systems of being— while humans have opted for a multicellular symbiotic structure that is complex in nature, viral life is rudimentary, unicellular, a simple replicator. N. Katherine Hayles points out that in their evolutionary journey, humans and viruses have chosen diametrically opposed paths:

Humans have achieved dominance within their evolutionary niche by evolving toward increased cognitive complexity, developing language with associated changes in brain and body, evolving elaborate social structures.... Viruses, by

contrast, have evolved toward increased simplicity. Viruses replicate by hijacking a cell's machinery and using it to proliferate, which allows them to have a much smaller genome than the cell itself, a characteristic favoring rapid replication. (Hayles 68)

Viral mutation and human evolution

Dawkins had earlier speculated that viruses have evolved from the rebel genes of the primal bacteria as they developed a strategy of survival based on genetic mutation (Dawkins 16). It appears then that there is a binary opposition between the two diverse cellular functions. Infectious diseases in humans are about microbial survival "by [their] co-opting certain of our genetic, cellular, and immune mechanisms to ensure their continuing transmission" (Morens 1078). Morens and Fauci refer to Richard Dawkins on this point: "Evolution occurs on the level of gene competition and we, phenotypic humans, are merely genetic 'survival machines' in the competition between microbes and humans" (Morens 1078). But the viral reality is more complex than mere replication of self, using the host DNA, for the transfer of genetic information. Annu Dahiya points towards the experiments conducted by Sol Spiegelman at the University of Illinois Champaign- Urbana in the early 1970s to show how Viruses can exist and proliferate even without directly mutating a host DNA (Hayles 69). In his study Spiegelman found that a certain bacterial virus (phage) called MS2 which infects E.coli bacteria could replicate and reproduce their RNA (Hayles 69). As the phage had no DNA—its genetic material was RNA, the question arises then how it completes its life cycle in a unicellular organism dominated by DNA. The answer is that the viral RNA can indeed self-replicate in virto rather than in vivo, which allows the phage to grow exponentially.

In his Tierra project of 1990, biologist Thomas Ray made even more curious observations using computer programming to determine evolutionary trajectory (Ray 211-

214). This was a silico experiment designed to study evolutionary and ecological algorithms, where artificial organisms fought for CPU time and memory space. In the program, a computer programmed species akin to the virus had deliberately lost a significant portion of their genome coding for replication and now were replicating via the gene code of other species. Their shortened genome allowed for a faster pace of reproduction allowing them an evolutionary advantage over the other species. These parasites were in turn then parasite by species that had lost even more of their code and exhibited tendencies that Ray termed as hyperparasitism (Ray 212). This is indeed an ontological entanglement that results in mutation and continuous genetic transformation, a property that viruses have optimized in their evolutionary journey. The RNA viruses inherently lack polymerase error correction mechanism; thus, they attack the host body as quasi-species or as a swarm of many variants which are difficult to identify for the host organism (Holland 02). In the case of the SARS COVID- 19, which is also an RNA virus there has been continuous mutation, and with the spread of the virus to varied corners in various host communities there are now different variants of the original genome, suggesting that the virus has continuously mutated and has evolved within few generations. This is a completely diverse track of evolutionary practice which eschews the more stable but comparatively slower genetic changes in complex multicellular organisms. In species such as humans, multiple factors such as sexual selection, stabilizing selection, frequency dependent selection, directional selection drive the evolutionary process. The comparative pace at which the viral entity mutates makes it difficult for the multicellular organism to develop proper response systems to them.

The conflict as exposed by the pandemic is then between the anthropocentric system which with its advanced cognition has developed various routines of hygiene and vaccines and on the COVID 19's side are "the advantages of rapid replication enabled by a very short genome and an extreme contagion through its ability to disperse through the air and to live

for many hours on a variety of surfaces" (Hayles 71). The pandemic has radically changed the narrative of healthy bodies and sick bodies through its latent spread through bodies to stay undetected and hence mobile and ready to spread. The viral entity does not advertently cause illness or death, rather they would want the continued existence of the host to ensure their continued appropriation of the host cells. The different symptoms such as fever, nausea, inability to recognize odour, respiratory difficulties arise due to the immune-defence system trying to combat the pathogen and the resultant mutation which causes cellular death. In the case of the COVID- 19, it seems to have developed a stealth mode to spread to a maximum number of host bodies before being identified by its symptomatic effects (Machhi 02).

Pandemic and the New Material response

The planetary nature of the virus calls for a planetary response to it. There is a need to move beyond Susan Sontag's notion of illness as "onerous citizenship" (Sontag 03), and need to develop frameworks, metaphors, cognitive maps, and scientific and ideological *doxa* through which pandemics and infectious diseases might be articulated. There is a need to discursively incorporate the health of the nonhuman companion species in any future deliberation of health policies. New materialism allows for a heterogeneous political space to emerge and consider nonhuman forms of influence and agency. Braidotti considers that new materialist approach which brings non-human entities as relevant "subjects" of ethics and justice and helps "renaturalise justice" (Braidotti 31). The virus has shattered the anthropocentric discourse of human exclusivism and species supremacy. Firstly, the fact that the virus jumped species from bats to human beings due to the demand and consumption of exotic meat, exposes the genetic transference which happens between the human and the non-human regularly, thereby discrediting any theory which demarcates humans as ontologically different from other non-human organisms. Secondly, it makes it clear that the human species may be the dominant organism within their specific ecological niche, but there exist many

such other niches which are composed and run by different rules, and these niches overlap the niche supposedly dominated by humans. Also, in the case of human interaction with the virosphere, a molecular investigation is required to understand the implications of such a contact.

In their interaction with the human cells, viruses try to alter them at a molecular level, while the cells in turn strive to maintain their homoeostasis (Machhi 02). Baruch Spinoza's philosophical notion of *conatus*¹, can be employed to study the interaction of the virus with the human cell and the immune system. The site of interaction between the human cell and the virus encourages one to think about viral infection and the immunological response as a cognitive process as well as a physiological and pathological sense and suggests a continuous learning at the cellular level from the viral entity.

Unlike his contemporaries like Blaise Pascal, Spinoza did not believe in the inherent superiority of man over nature. In a dislodging of anthropocentric worldview, he rejected all conception design in the natural world. He visualized Nature as a totality of finite processes, which have no bearing on what may be "best" for human beings. Such a view of the natural world does not have a teleological preference for the human. For Spinoza mind and matter are both affected by the forces and powers of nature. He writes "We are acted on, insofar as we are a part of Nature, which cannot be conceived through itself, without the others" (Spinozaiv). Such a philosophical perspective can help understand a phenomenon like the pandemic, as it situates the human within the dynamic totality of nature. Central to such interactions with the external world is Spinoza's conceptualization of *conatus*. It is the desire for self-preservation, according to Spinoza, "each thing, as far as it lies in itself, strives to persevere in its being" (Spinozaiv). For Jane Bennett, *conatus* becomes an important philosophical tool to grasp the vibrant nature of matter. She points out that according to Spinoza there is a certain inclination in bodies to preserve the self, "Each thing [res], as far as

it can by its own power strives [conatur] to persevere in its own being" (Bennett, Vibrant Matter, 02). It is an appetite, an active impulsion to persist. Every entity whether human or non-human shares this conative nature "Any thing whatsoever, whether it be more perfect or less perfect, will always be able to persist in existing with that same force whereby it begins to exist, so that in this respect all things are equal" (Ibid). Conatus implies an intrinsic relationship between human and the non-human, the molecular equality suggests that human do not form a "separate imperium" unto themselves, moreover they do not even command the imperium of nature which they are part of. The state of being and experience is not subjective it is an interruption of the flux of intensities. The continuous interaction of the human and the nonhuman persists at the borders of our being. There is a continuous exchange with nonhuman cells through which the human cells persist and better themselves by evolving resistant strains. This is particularly true in the case of the RNA viruses like COVID-19. In COVID-19 infection, the RNA is released into the cytoplasm of the host cell and it translates viral proteins followed by viral genome replication. Viral particles then incorporate into the endoplasmic reticulum and the vesicles containing the virus particles fuse with the plasma membrane to release the virus (Streicher and Jouvenet 1139). Immunological response requires prompt action by pattern recognition receptors (PRRs) to detect the RNA:

Sensing of viral RNA by PRRs results in the production of the Type-I and –III antiviral interferons (IFNs) and chemokines. The activation of this IFN-mediated antiviral response is the first major defense mechanism against viral infections. (Streicher and Jouvenet 1139).

Thus, immune response requires a translation of the viral matter as well as its consequent (desired) dissolution into the human cell, a continuous process of non-self-transmission and its translation and subsequent absorption by the self. *Conatus* (persistence) at the cellular level then comprises sequential acts such as specific antigen recognition and activation,

immunological tolerance, and memory formation at the cellular level. In a derivative sense, one can argue that the presence of the infectious non-self is imperative for the evolution of the noninfectious self.

This interaction between the human immune system and virus, which leads to subsequent mutation or annihilation can be sighted as an instance of what New Materialist theorist Jane Bennett terms as "Thing Power". Building on Spinoza's notion of *conatus* "thing-power offers an alternative to the object as a way of encountering the nonhuman world" (2010 xvii). It is the agency of material objects both animated and non-animated to act and consequently impact other material objects and eventually produce effects in the world.

The virus with its material agency produces effects on the human body, society and human lived reality as a whole. COVID- 19 with its disruptive attributes effects changes societal, bodily and economic- acts as an "operator" (2010 42). It (the virus) functions as a catalyst of change in the sphere in which enters, as a pathogenic vector, an assemblage converter. COVID-19 is essentially an 'actor in a network', "perhaps the smallest but the most disruptive, of a complex socio-technological net that involves doctors, patients, nurses, hospitals, laboratories, states, parliaments, airports, police, politicians, microscopes, masks, and mobile applications designed to identify possible infected people" (Scolari np). As Michel Serres notes in his celebrated book *The Parasite*, whether the (viral) parasite produces a fever or just hot air, it is a "thermal exciter" (Serres x), it is indeed a catalytic agent "it is both the atom of a relation and the production of a change in this relation" (Ibid). The viral parasite "produces toxins, inflammations, fever.... it excites the milieu. It excites it thermically, making noise and producing a fever. It intervenes in the networks, interrupting messages and parasiting the transmission" (Serres 144). Yet it irritates to initiate changes, it makes the "equilibrium of exchange" (Serres 154) fluctuate, and can initiate gigantic chain reaction or reproduction in the system it invades. The Corona virus follows the logic of exploitation without exchange, but one should be mindful that the virus purportedly originated in a place where animals were sold for human consumption, with no return for the animal sold. In a sense the COVID 19 virus is a parasite that parasites the parasite, arguably the most efficient parasite on the planet. COVID 19 acts as a reminder that the "parasitic relation is intersubjective. It is the atomic form of our relations. Let us try to face it head-on, like death, like the sun. We are all attacked, together" (Serres 08). With the consistent waves of COVID 19 variants emerging seasonally human must consider the parasite as "the elementary relation" (Serres 224) and human interaction with the virus might initiate an ethical relationship between human and the "animal".

Conclusion

There is no denying that COVID- 19 has caused insurmountable grief through innumerous deaths, economic loss, it has brought a sizable number of global populations under the threat of complete economic dissolution, hundreds and thousands of jobs were lost in the wake of the pandemic and numerous people forced to migrate and lead a precarious life. At the same time, however, the pandemic as a planetary event has allowed for a new definition of the virus as a companion species to emerge. It has radically changed the human perception regarding the immediate environment and holistically altered our interaction with our biosphere. The virus has forced us to think "new thoughts" in terms of our socio-political structure, cultural acts and even our bodily performance, it has completely revolutionized our anthropocentric vocabulary and exposed the fragile nature of capitalocene. By making the global system of transit its medium of rapid spread and consequently disrupting the very system during the phases of lockdown the pandemic has stressed the need to develop a local sustainable system along with global networks of exchange. The viral pandemic has also transformed our medical and political conceptions of health, the body, collectivity, and biopolitical governance. It has blatantly made visible the inevitable interdependence of

humans, nonhumans, and their shared environment, and forced us to think about health and medical infrastructure on a planetary scale. It has initiated a movement away from the models of scientific certainty and anthropocentric health, and rely instead on more malleable and wide-reaching scientific and imaginative planetary epistemologies. Viruses as a more generic entity can help us think about "becoming" in a revolutionized manner, through their constant mutation and symbiotic transference they convey a completely divergent narrative of planetary evolution, one in which human centrality in scheme of Earth's greater evolutionary trajectory is severely undermined.

Notes

Works Cited

- Barad, Karen. Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning. Durham: Duke University Press, 2007. Print.
- Bennett, Jane. "The Force of Things: Steps toward an Ecology of Matter." *Political Theory* 32.3 (2004): 347-372. Print.
- -- Vibrant Matter: A Political Ecology of Things. Durham: Duke University Press, 2010.

 Print.

¹Spinoza in his *Ethics, Demonstrated in Geometrical Order* defines the term *conatus* as the intrinsic and essential characteristic of life to preserve its own being. Beings capacity for action increases or decreases in direct proportion to its *conatus*.

²An operator, as Bennett points out in her *Vibrant Matter*, ³is an actant and is a part of an assemblage. By virtue of its position and its temporal location it functions as a decisive catalyzing factor in an event.

- Braidotti, Rosi, and Simone Bignall, eds. *Posthuman Ecologies: Complexity and Process after Deleuze*. Maryland: Rowman & Littlefield, 2018. Print.
- Colebrook, Claire. "On Not Becoming Man: The Materialist Politics of Unactualized Potential." *Material Feminisms* (2008): pp. 52-84. Print.
- Connolly, William E. Facing the Planetary. Durham: Duke University Press, 2017. Print.
- Chakrabarty, Dipesh. *The Climate of History in a Planetary Age*. Chicago: University of Chicago Press, 2021. Print.
- -- "An Era of Pandemics? What is Global and What is Planetary About COVID-19." the Moment, Critical Inquiry. Available at: https://critinq. wordpress. com/2020/10/16/an-era-of-pandemics-what-is-global-and-what-is-planetaryabout-COVID-19 (2020). (Accessed November 1, 2021)
- Dawkins, Richard. The Selfish Gene. London: Macat Library, 2017. Print.
- Hayles, N. Katherine. "Novel Corona: Posthuman Virus." *Critical Inquiry* 47. S2 (2021): pp. 68-72. Print.
- Holland, John J., ed. *Genetic Diversity of RNA Viruses*. Vol. 176. Springer Science & Business Media, 2012. Print.
- Machhi, Jatin, et al. "The Natural History, Pathobiology, and Clinical Manifestations of SARS-CoV-2 Infections." *Journal of Neuroimmune Pharmacology* (2020): pp. 1-28. Print.
- MacLeod, Norman. "COVID-19 Metaphors." Critical Inquiry 47. S2 (2021): S49-S51. Print.
- Maciejewska, Barbara, Tomasz Olszak, and ZuzannaDrulis-Kawa. "Applications of bacteriophages versus phage enzymes to combat and cure bacterial infections: an ambitious and also a realistic application?." *Applied Microbiology and Biotechnology* 102.6 (2018): pp. 2563-2581. Print.

- Margulis, Lynn. Symbiotic Planet: A New Look at Evolution. New York: Basic Books, 2008.

 Print.
- Morens, David M., and Anthony S. Fauci. "Emerging Pandemic Diseases: How We Got to COVID-19." *Cell* (2020): pp.1077- 1092. Print.
- Ray, Thomas S., and Chenmei Xu. "Measures of Evolvability in Tierra." *Artificial Life and Robotics* 5.4 (2001): pp. 211-214. Print.
- Roberts, Keith, et al. "Molecular Biology of the Cell." New York: Garland Science 32.2 (2002): 1221- 1227. Print.
- Ryder, Richard. "Speciesism Again: The Original Leaflet." *Critical Society* 2.1 (2010): pp.1-2. Print.
- Ryu, Wang-Shick. "New Emerging Viruses." *Molecular Virology of Human Pathogenic Viruses* (2017): pp. 289–302.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7149753/

(Accessed November 1, 2021)

Scolari, Carlos A. "Coronavirus, Epidemics and Interfaces". Medium, Web. April 26, n.pag. 2020.

https://cscolari.medium.com/coronaviruses-epidemics-and-interfaces-134d4b7725a5 (Accessed November 1, 2021)

Serres, Michel. The Parasite. Vol. 1. Minneapolis: U of Minnesota Press, 2013. Print.

Sontag, Susan. Illness as Metaphor. New York: Farrar, Straus and Giroux, 1978. Print.

Spinoza, Baruch De. Ethics. London: Pattern Books, 2021. Print.

Streicher, Felix, and NolwennJouvenet. "Stimulation of Innate Immunity by host and viral RNAs." *Trends in Immunology* 40.12 (2019): pp. 1134-1148. Print.

Sanglap: Journal of Literary and Cultural Inquiry 8:1 (December 2021)

Youatt, Rafi. "Ecologies of Globalization: Mountain Governance and Multinatural Planetary Politics." In *Non-Human Nature in World Politics*. Switzerland: Springer, 2020. Print, pp. 73-90.

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