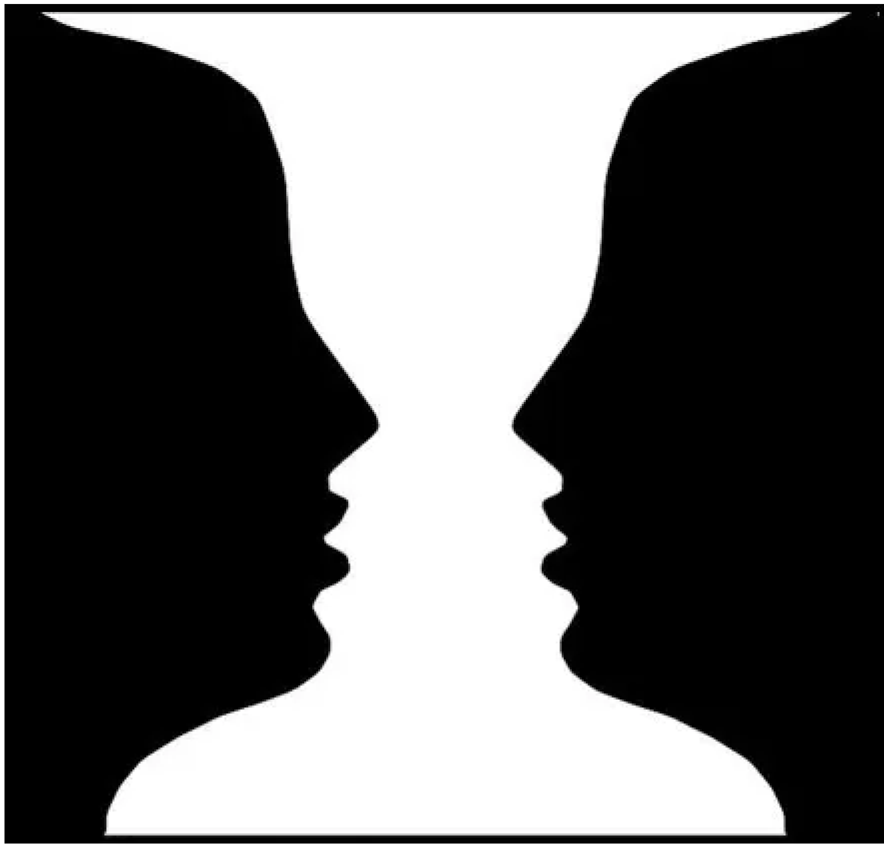

Chuka Nestor Emezue // Broad Street. West London. Summer of 1854. Wrought with a bad case of speaking anxieties, and once voted "Orator of the Year" by the Medical Society of London, Dr. John Snow confronts the Medical Council. Failing to sway his medical counterparts about the causal link of Cholera– through a not-so-elaborate fecal-oral transmission route – a visibly livid Dr. Snow immobilizes the public pump closest to his home, by removing its handle. A sincere vandalism, consequently thwarting further septicity. He will also become the poster-child for Classic Epidemiology, and his pump handle a lasting metaphor for the same. The moral of this story is a tool for medical socialization – a rite of passage, even; and the **Power of Metaphors** is its popular lesson**.**

Metaphors, even in medical vocabularies, are by their nature contradictions between subjectivism and objectivism. Otherwise, Aristotle simplifies their use, declaring: "ordinary words convey what we already know; it is for metaphor that we can best get hold of something fresh" (Rhetoric 1410b). In their definitive oeuvre, '**Metaphors We Live By**,' George Lakoff and Mark Johnson describe "experientialist" qualities of metaphors, as healthy substitutes for the "myths" of two conflicting domains: imagination and rationality (Lakoff and Johnson 187), objectivity and subjectivity. They theorize, "Objectivism and subjectivism need each other to exist. Each defines itself in opposition to the other and sees the other as the enemy." Metaphors become vehicles of connotation, "for understanding a concept only [by] its experiential basis." (18), and so, can be subjectively or objectively interpreted, nevertheless, highly contingent on context. I re-echo this standpoint as I try to clarify descriptors of metaphors in negative and positive spaces in healthcare – from universal to bedside care.

For a predetermination of what constitutes negative and positive spaces, we must begin with the field of architectural and interior décor design. Where negative spaces are undesignated sectors surrounding other fundamentals – such as bits and pieces of furniture or fixtures – within a visual field. To be sure, a coffee table occupies positive space. The distance between said coffee table and

your favorite armchair constitutes negative space. Both areas, mutually inclusive, form a unified visual connotation, each devoutly emphasizing the other – the complexity of this situation does not elude me. Still, space transcends physicality. This awareness can be regionally spatial, contextually immaterial, culturally disparate, chronologically ironical (i.e., drastically similar moments in repeating history)—and can occur in negative and positive spaces.

The Warwick Research Collective puts this in focus. In explaining economic space, they describe "peripheral modernities" between the industrialized West and 'the aesthetic of third-worldness" – an established dichotomy (Warwick Research Collective). Hence, you can feel superior residing in America (a 'first world' country) than you would be in South Sudan (a 'third world' country in the throes of a civil war). So that even though we will not discuss cultural relativism in this class, we can easily distinguish regions of the world that operate in negative and positive spaces — direct paradoxes of each other. For example, even though we might not agree with this aesthetic registering of a modernized West (again, say, the United States of America) and the developing non-West parts of the world (this time, Nigeria, where I am from), we can still register regional inequalities. Gordon-Larsen and colleagues paint this picture: lower-socioeconomic status matched to high-minority residential clusters matched to reduced access to so-called metropolitan amenities — neighborhood layouts, farmers' markets, women shelters, the presence of fire hydrants, or safe walking trails — form a recipe for lower health outcomes. (417-424). This recipe will apply in Brooklyn, NY, as it will in Bauchi State, Nigeria.

In his health article for the Atlantic, aptly titled '**The Trouble With Medicine's Metaphors**,' Dr. Dhruv Khullar, MD., calls out examples of medical metaphors, "Antibiotics clog up bacterial machinery by disrupting the supply chain. Diabetes coats red blood cells with sugar until they [are] little-glazed donuts. Life with chronic disease is a marathon, not a sprint, with bumps on the road and frequent detours." (2014). Still, in the enactment of medicine, metaphors lubricate physician-patient communication; they derive from what Dr. Vaidyanathan dubs "narrative scripts" that govern tacit and lock-step medical socialization (164-170). After all, in the last 100 years, 450 metaphors have amassed in the collective scholarship of documented medicine, in the form of "narrative scripts." Many of them food-themed, linked to the outline of fruits (Grape-like appearance of Hydatidiform moles – a rare mass of chorionic villi in the placenta of early pregnancy, visible to the naked eye) (Masukume and Zumla 55-56). Keep in mind that something as uncomplicated as a bunch of grapes presents strange superfluities to most non-Western diets, not to talk of as tools for medical training and preconception. Other metaphors abound, the smell of a vegetable can be a medical metaphor: the fruity-scented breath of diabetic ketoacidosis. Others utilize "dairy products, fauna, flora, astronomical bodies, weapons, dining table utensils, laboratory equipment, drinks and [colors]" (Masukume and Zumla 55-56). In the cognitive sciences, metaphors influence our moral propriety, too, our impression of *dirt* equals immorality and *cleanliness* equals virtue is one common bi-stable example (Lizardo 23). Meanwhile, Chen-Bo Zhong and Katie Liljenquist (1451-1452) tested this out using the Macbeth Effect via research. They found their research subjects tried to cleanse artificial psychological shame and *filthiness* after recalling

an unethical act or bearing witness to one, by craving actual physical cleaning with cleaning products.

Sometimes, metaphors pacify through comicality to those who bear witness – of course at the behest of the primary sufferer whose language of pain can be abstruse, unsymbolic, compound, memorable – but hardly, metaphorical. Of course, in the same space, metaphors can inflict a sense of cruelty, and a fantastic brutality by the one not bearing said pain. Buetow (80-83) grounds this conception in medical care, by describing examples of *spaces* in medical care. For example, the positive space between doctor-patient camaraderie (or lack thereof). Or the negative space in the detached aloofness during clinical encounters and non-encounters (in the examination room, or behind an EHR screen, or when a medical bill comes in the mail); or negative spaces of nonverbal signals, "information not exchanged" (80-83). Still, patients rate physicians who use metaphorical analogies as better communicators (Casarett et al. 255-260), at least in the West. If not, how can the oncologist explain the jargoned complications of tumor sequencing and "Exon specificity" and "Driver mutations" in molecular testing to isolate modifiable molecular targets? (Pinheiro et al. 445-449).

Of note, the context of westernized metaphors comes apart (even misfires) in developing contexts, or within 'third world aesthetics." So that, to me, a recent immigrant from Nigeria, the presence of something as inconspicuous as a curbside fire hydrant, unheeded by all else (but the puppies who water them and me, the contemporary immigrant eyewitness, with time on his hands) can presage a sequence of metaphorical implications such as the obtainability, simplicity, and dependability of a 'basic' amenity – portable water. Buetow explains, "Cultural and social attributes, norms, and rituals can influence the size, meaning, and use of informal and feature spaces" (80-83). In a non-Western context, the utility of metaphors birthed an ongoing debate, particularly in Africa and Asian medical texts, where the usage of unfitting or unfamiliar metaphors is neither locally nor culturally relevant – not to the elderly woman who cannot describe her pain in English, nor to the local medical resident trying her luck with metaphors. For example, I learned of amoebas and Plasmodium in a school without microscopes. Biology textbooks, in color, were to me what Marvel comic books are to that kid in Brooklyn. So that even though metaphors like Snow's pump handle and Carswell's Grapes (a way of describing a racemose arrangement around the bronchioles in pulmonary tuberculosis) serve as veritable teaching tools in Western medical education and practice, and as cognitive tools between teacher and student, physician and patient, narrator and listener, intent and effect, and of course, between negative or positive spaces, they demonstrate questionable equivalence in emergent countries and non-Western medical education contexts.

Ultimately, we find this 'questionable equivalence' in a simple contraption – the fire hydrant. Whether you think of it as a real or metaphorical occupier (read: descriptor) of space. It can be metaphorical in the way it describes translocation of knowledge in medical training (i.e. medical school is "like drinking water out of a fire hydrant"). Likewise, its physicality presents as a metaphor – a covert assurance in your built environment, a covenant between you and your city mayor, based on the combinatory special effects of your taxation, your residency, your belongingness, social responsibility, the 'being there' of this proximate amenity, the promise of safety from

conflagrations. It is an artless, minimal mechanism here – in America, and yet, a profound, philosophical, and intricate non-member of the built environment in most world regions. To be sure, like Carswell's Grapes, the conception of a fire hydrant is extraneous to African urban design modernities (as is clean water for 2.5 billion people in the world, most, in developing countries, some in Flint, MI). The contrasts are stark and prefigure the metamorphoses between urbanity here in America (space notwithstanding) and non-urbanity there. As a result, history repeats itself. Where Snow removed a pump handle to end septicity, the likeness of the same is a fantastic amenity in most world regions, presenting two time-warped points of bi-stability. Case in point, the outbreaks of cholera presently in-progress as contagions in Harare, Zimbabwe, the southern Maradi region of Niger, Jere in Borno state, Nigeria and Hodeida, Yemen, amongst other hotbeds). Eventually, metaphors are only as useful as our intent to use them in contextualized time and space. Buetow (80-83) concludes on my behalf, "Awareness of negative space enables us to let go of our presumptions and be open to new possibilities." It is critical to understand, first, the power of metaphors; and, second, the global space in which they flourish or do harm.

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Image: **Rubin's vase** developed around 1915 by the Danish psychologist Edgar Rubin.