The Metaphor in the Machine: A deconstructive framework for policy metaphors and alternative futures

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"Your task is not to seek for love, but merely to seek and find all the barriers within yourself that you have built against it." - Rumi

"Who can make the muddy water clear? Let it be still, and it will gradually become clear." - Lao Tzu

"Light is the left hand of darkness and darkness the right hand of light." - Ursula Le Guin

When trying to describe the world, we tend to do so in metaphorical terms. That is, we tend to understand more abstract and complex phenomena in terms of things more concrete, physical and embodied. Poets, authors, and rhetoricians have harnessed the power and flexibility of metaphor for millennia. In fact, language has been said to be a "reef of dead metaphor", normalising how previous generations interacted and spoke in their day in order to make sense of our own (R.L.G, 2013). We coast through life, fall into love, and work at dead-end jobs. The use of metaphor illustrates and narrates our world, and is what Lakoff calls a "conceptual mapping". As such, it plays a foundational role in how we plan, enact policy, envision collective futures. I wish to look at what makes metaphors so influential and how they come to shape spaces of thought through the acronym VPACTS. As a discursive framework, it aims to provoke questioning into how metaphors invoke us to embody them in certain ways and illuminate key areas that metaphors tend to implicitly influence and constitute how we see the world, from questions of vitality and purpose, to that of time and space. From this structure, examples will be drawn from current political discourses of climate change, economics, religion, and environment.

Cognitive Metaphor Theory and Futures Studies

Metaphor as a conceptual construct was first suggested by cognitive linguist George Lakoff in his book *Metaphors We Live By*, in which he forwarded that metaphors conceptually frame our everyday experience, the goal of which is "understanding and experiencing one kind of thing in terms of another" (2003). In other words, metaphors are more than just linguistic devices; they say something about the underlying cognitive structures and embodied experience of ourselves. For Lakoff, "human *thought processes* are largely metaphorical...;metaphors as linguistic expressions are possible precisely because there are metaphors in a person's conceptual system" (2003). For example, the metaphor **Argument-as-War** helps to frame the act of arguing in terms of conflict and violence. By using the metaphor, we therefore frame and reinforce the association, which is a cognitive mapping. Linguistically, it can be expressed in many phrases, such as "winning the debate", "defending your point", and "undermining an argument". Yet in Lakoff's Cognitive Metaphor Theory (CMT), all of them trace back to the same conceptual and semantic association of "argument as war".

CMT is a constitutive theory of language, which holds that metaphor "*makes* reality by constituting perceived connections between things" (Flanik, 2011). That is, the conceptual metaphors used shape how we interact with the world and those interactions reinforce those metaphors when called upon. I wish to work within this framework, in trying to see how using different metaphors allow us to inhabit different worlds of thought and affect how we embody and experience. This therefore creates a dialectic between thought and action, mind and body, or the cognitive and embodied spheres. It centers on how the individual metaphorically maps the world, bracketing the questions "society" and "culture". While these metaphors then enter the intersubjective and socially constructed realm of negotiated discourse, that will not be my focus. Instead, I take as my basis the relationship between cognition and embodiment, and how metaphors are a linguistic bridge between the two.

Causal Layered Analysis

The field of Futures Studies is about studying "images of the future", or dominant ideas and/or narratives of what the future might be like. They are necessarily culturally and societally based and differ amongst identity groups, inflected by media and drawn from many sources from religion to science fiction. Ultimately, such images constrain and liberate people to imagine the future in different ways and therefore act as lens by which the possible is seen through.

The corollary to there not being a single "future", is that futures studies is not about prediction but instead about forecasting alternative futures, generally 20 - 50 years out. There is no universal "future" out there to be unearthed, yet different groups have their own "preferred futures" that enter and make up the realm of politics, where images of the futures and ideas collide and coexist. The exercise of foresight is less a mantra than a habit, an ethos that has to be internalized by organizations and individuals to continually stay aware of shifting images of the future and emerging issues. To quote Dator, "to be useful, futures studies needs to precede, and then be linked to strategic planning, and then to administration" (Dator, 2007) This process of imagining possible alternative futures, envisioning and planning preferred futures, and implementing actionable plans towards them, must be an ongoing task.

Where the concept of "futures" opens opportunities for pluralistic creativity, it is also a concept and therefore must be understood via metaphor, as well as narrative. In his Causal Layered Analysis methodology, futurist Sohail Inayatullah channels poststructuralist and CMT-style insights towards deconstructing and mapping metaphors in different policy areas. At the core is his "iceberg" or "depth" metaphor in which policy agendas can be uncovered layer by layer to reveal at bottom its foundational myth or metaphor.

The first level, the "litany", is the surface or headline summary of an issue, generally backed up by data or eye-catching charts. These are the stories circulating on Facebook feeds and news channels, capturing simply one side of an event or giving many pieces of evidence to support its narrative. For example, a litany about climate change might be a recent headline "Record-breaking climate change pushes world into 'uncharted territory". The second level, the "system", moves into analyzing the causes and structural conditions for the issue, through briefs and policy papers as well as expert testimony within a domain. A description might be "Climate change as due to rising carbon emissions". The third level, the "worldview", delves into how discourses, ideologies, and civilizational narratives "do more than cause or mediate the issue, but constitute it" (Inayatullah, 2015). A description at this step might be, "climate change as a product of modernity". The final level, the "myth and metaphor", reveals the intuitive and emotional imagery that frames the issue, that invokes the heart rather than the mind. A description for this may sound like, "climate change as death, an end".

Understanding how metaphors unconsciously and emotionally energize politics, agendas, and policies therefore becomes a key area of interest. Taking CMT and embodied cognition as a starting point, I wished to probe what gives life to certain metaphors and how they continue to be reproduced. Inayatullah sees them as the primary site of intervention for transforming identities and organizations, and as a method to "explore their own double binds and...a way to transform their own life stories" (2015). By changing metaphors, we can then comes to alternatively know and embody ourselves.

Metaphor Prompts and VPACTS

In the spirit of better understanding how we embody our metaphors, I wish to frame VPACTS less as a framework and more as a set of prompts, a stable of questions with each shedding light on a different side of a metaphor. Each question constitutes the metaphor in a different light and therefore opens novel avenues for introspection and understanding how metaphors shape identities and discourse.

Vitality	What is life? What constitutes living things and by what standards?
Purpose	What political, ethical and philosophical values direct the metaphor? For what end and what interest group?
Affect	What emotions, gut reactions, and feelings are conjured by the metaphor? How does this affective response differ among people, groups, polities?
Complexity	What is the relation between parts and wholes? Does the metaphoric context intended to simplify or uncover complexity around an issue?
Time	How is time experienced through this metaphor? What kind of temporalities does the metaphor evoke and how does it structure discourse?
Space	How is space created through the metaphor? What types of spatialities and worlds does the metaphor prioritize and invoke?

Vitality

What is life? How does the metaphor frame what is living or what counts as life? Secondarily, how does this framing of life legitimize certain discourses or policies? For example, the metaphor of the **Nation-as-Body** promotes language around protecting the borders from infection, invasion, and pollution. It reframes the "immigration debate into an issue of survival - of preventing social and/or racial annihilation" (Vallis, 2016). Labeling immigrants as "hordes", "blood-suckers of the welfare state", and as "viruses" simultaneously dehumanizes and denaturalizes them. They fall into the realm of non-life, and therefore become legitimized to be governed as such.

Purpose

What is the metaphor for? Does it back certain values or political positions? The question of purpose enlivens the intentionality and context behind a metaphors use. What is the teleology, the direction, the design behind an actor's deployment of a metaphor? For example, the metaphor of **Brain-as-Computer** applies the notion of a computational, silicon machine to that of the brain. As such, the brain comes to be simplified in terms of computational verbiage like "code", "programming", "data", and "messaging". As a result, brains and cognition become digitized and "coded" within policy-making as programmable, distant and coldly comprehending the world, and amenable to knowledge via more data and quantification. MIT roboticist Rodney Brooks has noted the limit of the brain-as-computer, observing that "we will be freer to make new discoveries when the computational metaphor is replaced by metaphors that help us understand the brain as part of a behaving system in the world" (Brooks, 2014). Such comprehension is the role of metaphor, and by understanding the intentionality and purpose behind its usage and the kinds of politics it legitimates, the better its discourse can be situated within a broader set of alternatives as well as which ones it excludes.

Affect

What types of emotions and sensations does the metaphor tend to evoke? What are the gut reactions and intuitive feelings that arise from its use? For William James, emotion was the bodily response to a stimulus followed by the feeling of and labeling of what it consisted of. Therefore, when encountering a metaphor, there is a similar bodily reaction as well as a linguistic categorization of how that metaphor affected us. How might it affect others and be received by different groups? The metaphor of **Time-as-Money** invokes an affect of hurriedness, of selectiveness and self-interest. Time must be measured and only "given" to those worthy of our time, lest we "run out" or "waste" our time. To waste time then evokes feelings of shame, anger, and perhaps renewed energy or depression. But these affects emerge from the metaphors used and how they interact with our memories, environments, loved ones, and existing personal myths and worldviews.

Complexity

How does the metaphor treat relationships between the part and the whole? Does the metaphor aim towards simplifying an issue or instead point towards revealing hidden complexity? In conceptualizing these questions, I see them as related to the questions of Purpose. Is the metaphor being intentionally used to illuminate simplicity or complexity? This will also depend on the linguistic context as well as how the metaphor is further elaborated and detailed upon. For example, **Life-as-Journey** could be a simplifying metaphor if left at that. One simply needs to "find the right path", "follow one's heart", and "keep moving forward". However, journey's are rarely without hardship or smooth-sailing. Perhaps **Life-as-Journey** could be elaborated in terms of the expectation for difficulty, on problematizing the linear progress of the life narrative. That could be through "stopping to smell the flowers" or life being about the "experience rather than the end". Either way, metaphors aid in understanding one thing in terms of another, but it is the contextual details that build upon it that focus the meaning-making upon simplicity or complexity, and the relationships between the part and the whole.

Time

How is time framed by the metaphor? What images or time-worlds are created and invoked by the metaphor? Like the questions of Complexity, the framing of Time is illuminated through how it is elaborated and contextualized. Ultimately, this category was inspired as a proxy for the process of change. St. Augustine, in pondering time, makes this observation about time: "If then, in order to be time at all, the present is so made that it passes into the past, how can we say that this present also 'is'? The cause of its being is that it will cease to be. So indeed we cannot truly say that time exists except in the sense that it tends towards non-existence." (Augustine, Book XI). How does the metaphor frame change and novelty? For example, Lakoff's metaphor of **Ideas-as-Commodities** references turns of phrases such as, "It's important to sell your idea", "That's a worthless idea", and, "There's always a market for good ideas" (Lakoff, 1998). My conception of time, then, comes from embodying the source (i.e a commodity) and how it is contextualized. For me, commodities are traded on the fast-paced globalized market, transported in days and bought in seconds, and used up then discarded. By applying the source of "commodity" to the target "ideas", I enter a time-world where ideas are in constant flux and consumption, hurried and frantic, as well as along a linear yet fragmented temporal trajectory.

Space

In what ways does the metaphor frame the notion of space? What kinds of spatial relations and worlds does it invoke? Cognitive psychologists Casanto and Boroditsky observed that, "the relationship between space and time in language is asymmetrical: people talk about time in terms of space more often than they talk about space in terms of time (Lakoff & Johnson, 1980, 1999). This pattern in language suggests that our conceptions of space and time might be asymmetrically dependent: we construct representations of time by co-opting mental representations of space, but not necessarily the converse." (Boroditsky, 2007). In other words,

metaphors of space predominantly structure how we understand time, which seems to "move" or be "cyclical". Lakoff calls these "orientational metaphors", which emerge from our bodily movement through the world, such as **Happy-as-Up** and **Sad-as-Down** (1998). Further than simply orientation, metaphors structure the nature of space as such. Invoking **Eyes-as-Oceans** brings to mind vast expanses and deep depths, while **Politics-as-Arena** envisions a closed area of land with many traps and hostile combatants. Therefore, space becomes another important framing when metaphors are used.

The prompts from VPACTS are not universally applicable to all metaphors; certain of the questions will be more relevant to some metaphors than to others. As well, how salient certain of the prompts are will depend on individual preferences, social contexts in which they're used, as well as cultural patterns and regular usage. However, they should provide a starting point in asking how common metaphors come to shape identities, institutions, collectives, and politics.

Policy Metaphors of Nature

This final section will seek to demonstrate how the VPACTS prompts may be useful in understanding policy metaphors and how different sides of a metaphor can come to prominence. Specifically, the metaphors will be on nature and the environment, drawn from Jedediah Purdy's book *After Nature*, in which he outlines four primary metaphors that have shaped American naturalism.

Purdy examines the history of the environment and "Nature" as a concept and discourse in America's development. He arrives at four distinct metaphors used at varying times:

Providential Nature

The first is **Nature-as-Divine-Gift**, in which the American landscape became one of frontier settlement, private property, and of dominating the wilderness in order to feed development. Purdy references two prominent founders of the US, James Wilson and John Quincy Adams, as embodying this metaphor. In envisioning the liberty and bounty open to those on the frontier, Wilson paints a veritable garden of Eden ripe for feeding the newly United States of America, saying, "Placid husbandry walks in front, attended by the venerable plough. Lowing herds adorn our vallies; bleating flocks spread over our hills; verdant meadows, enamelled pastures, yellow harvests, bending orchards, rise in rapid succession from east to west" (Purdy, 2015). Adams goes further in drumming the providential beat of American exceptionalism, holding that indigenous and native peoples standing in the way of frontier development must be excised: "Shall the lordly savage ... forbid the wilderness to blossom like a rose? Shall he forbid the oaks of the forest to fall before the axe of industry, and to rise again, transformed into the habitations of ease and elegance? Shall he doom an immense region of the world to perpetual desolation ... [and] the fields and the valleys which a beneficent God has formed to teem with the life of innumerable multitudes, be condemned to everlasting barrenness?" (Purdy, 2015). If Nature is a

divine gift to the American project, then anything standing in the way is by definition a crime and sin.

The metaphors used here revolve around the life-giving bounty and paradise of the American landscape. *Vitality*, what is living, therefore infuses the providential gift of Nature. However, it is not life and nature left untouched, but nature tamed and developed. Only once "fall[en] before the axe of industry" will the it "blossom like a rose". The *Purpose* therefore is to legitimize continued expansion and development of American lands, to allow "bleating flocks" and "lowing herds" to graze and save the region from "perpetual desolation". *Affect* arises as one of divine optimism and power, where confidence and brazen can-do attitudes triumphs over the perceived negativity of indigenous peoples. *Space* comes to be idealized through hills, meadows, pastures, and "bending orchards". The land is rich and limitless. Whatever *Complexity* that Nature might have is reduced to the core image of divine right bestowed upon America.

Nature and Beauty

The next metaphor is of **Nature-as-Romance**, following the tradition of poet and naturalist Henry David Thoreau in characterizing nature as beautiful and sublime in itself. Purdy describes Thoreau's account as one of a "ascetic hermit-errant, whose careful attention to his 'life in the woods' would help him to see life at large" (2015). The romance therefore is one of rugged individualism through being with nature, one which Purdy summarizes neatly through the idiom, "know the world to know yourself" (2015). The movement of Transcendentalism, which has come to be associated with Thoreau, seeks to find authenticity and self-knowledge through contemplating nature. It is through quiet and purposeful meditation on nature and the self that one can find divinity or spirituality, as he concludes in *Walden*:

"The life in us is like the water in the river. It may rise this year higher than man has ever known it, and flood the parched uplands; even this may be the eventful year, which will drown out all our muskrats. It was not always dry land where we dwell. I see far inland the banks which the stream anciently washed, before science began to record its freshets. Who does not feel his faith in a resurrection and immortality strengthened by hearing of this? Who knows what beautiful and winged life, whose egg has been buried for ages under many concentric layers of woodenness in the dead dry life of society,...may unexpectedly come forth from amidst society's most trivial and handselled furniture, to enjoy its perfect summer life at last!" (Thoreau, 1854).

Metaphors of **Nature-as-Romance** here dwell on *Vitality* through comparisons to water and metamorphosis. What is living, that "beautiful and winged life", belongs most to those who venture outside mainstream society and experience the fullness of nature's beauty. His entire account is dedicated to painting *Time* and *Space* as rhythmic and enchanting, exhorting that the reader should "be blessed if we lived in the present always" (Thoreau, 1854). Trees, birds, and butterflies pervade his journalistic experiences, promoting an *Affect* of unity, calmness, and peaceful appreciation. The romance is between the individual and his/her natural surroundings, and therefore belies a *Purpose* dedicated to preservation and protection of an ideal and

authentic environment. It is a romance with a certain type of landscape, one which Sierra Club founder John Muir outlines in his vision for national parks as having, "profound solitude...full of God's thoughts...[where] in a few minutes you will find yourself in the midst of...the best care-killing scenery on the continent" (Purdy, 2015). Nature therefore becomes a canvas for human self-exploration, individuality, authenticity, and a partner in love.

Managing Nature

The third metaphor is of **Nature-as-Resource**, which Purdy sees exemplified by progressive politician Albert Beveridge, a strong supporter of forest conservation and technocratic, administrative governance. In reaction to the providential frontier expansion, he advocated for the need to manage a more complex reality for the good of the state, lamenting the frontier as a "period of destruction...ruinous exploitation which was called 'development' but was the reverse" (Purdy, 2015). Nature then becomes utilitarian, part of the emerging "conservation" discourse spearheaded by Theodore Roosevelt and other Progressives. Conservation came to be defined it by its "anti-thesis, 'waste',...an obsessive indictment of any system or process that failed to get the most value from its materials, whether those were minerals, trees, or human bodies and energy" (Purdy, 2015). This movement from frontier self-interest and expression towards national management and governance is exemplified in Roosevelt's remarks: "The health and vitality of our people are at least as well worth conserving as their forests, waters, lands, and minerals" (Purdy, 2015). Nature, of which citizens and Americans are an aspect, must not be wasted in forwarding a strong, united, and virtuous nation.

Nature-as-Resource aligns with other resource metaphors, such as time, money, and energy. *Vitality*, as Roosevelt points out, emerges less from nature and its resources but in the discovery of efficiencies, in the management itself. Governance of nature becomes the life-giving force to the metaphor. The *Purpose* lies in characterization as a resource, which implies an arbiter over them in order to best judge its proper use. For Roosevelt, this proper management of resources was key to legitimizing the state, and creating strong and environmentally aware citizens with a responsibility towards the greater good. By characterizing a resource, there also emerges ways of both conserving and wasting them. *Space* becomes seen as delineable, divided among multiple stores of resources, quantifiable and measurable in its stocks. *Time* as well comes to be measured in terms of timelines of expenditure, recharge and renewal periods, and bureaucracy. By making nature about technocratic management, the *Affect* transforms from divine optimism and peaceful contemplation to one of serious, emotionless, stoic duty.

Natural Relationships

Finally, **Nature-as-ecology** metaphor is the latest development in American environmental consciousness, shifting the focus to a systems-view, to the interrelations between flora, fauna, and human activity. It emerged from a certain historical juncture in the 50's and 60's, where writers like Rachel Carson and Aldo Leopold wrote passionately about the threats of human-made pollutants, rapid development, and despoiling of the natural world. The concept of

ecology emphasizes the interdependence of all life and non-life, in which, "natural systems, including the bodies of living things, are linked and inter-permeable" and through Carson and Leopold was combined with the "Romantic ideas that nature mattered in itself and contained lessons essential to the human spirit" (Purdy, 2015). This idea of ecological webs of connectivity between all things inspired a new age of environmental law-making under the Nixon administration, which argued that "environmental responsibility could unite Americans split over race and war" (Purdy, 2015). Environmental writer Paul Shepard similarly declared in 1969 that, "we must affirm nature's metabolism as our own' and that 'the world is a being, a part of our own body" (Purdy, 2015). Through the EPA, Clean Air Act, and Clean Water Act, the promise of ecological thought was to create an identity through recognition of relations and interdependence with the natural world, and the increasing footprint of human activity. Lawmakers also sounded the alarm, such as Edmund Muskie who warned, "Man, no less than the peregrine falcon or the mountain lion, is an endangered species" (Purdy, 2015). Also touched upon was the fragility and complexity of ecologies, which humans threatened to unbalance. Congressman Charles Vanik embodied the essence of the metaphor in arguing, "harmful discharges...waste of resources...will continue to disrupt, in ways we do not now understand, the natural balance of the world - a balance that evolved over billions of years and which supports all living things, including ourselves" (Purdy, 2015). In short, we are all connected and thus must be informed by an ethics that recognizes as such.

The question of Vitality comes to center on ecological systems, where the system as a whole can be seen to be alive. What it means to be "living" therefore depends on multiple other kinds of life also continuing to live and prosper. *Complexity* is placed front and center, the emphasis being on the fragility, tipping points, and relational aspects of natural systems. From there, you get terms like "keystone species", "endangered species", and "ecosystem services". The plight of the bees becomes also a crisis for humans. *Purpose* is found in enmeshing people in webs of intimate connection with nature and others, and politically translates into conservation, of maintaining balance with the world we depend on. Where that balance lies is itself a thorny political issue and infusing the metaphor of **Nature-as-Ecology** with alternative views and positions becomes the battleground of politics. Space comes to be interpolated by different environmental forces, both natural and man-made, from the air and water to microbes and sunlight. How space is conceived across different scales also plays an important role. Affect is shaped as well, by the ecological imperative to recognize the inherent interrelationship between all things. To those more inclined towards personal sovereignty and liberty, the metaphor may invoke more anger and dismissal while for others, perhaps resigned depression or detachment. The emotional tenor of a metaphor and how it affects someone will be very much individually and culturally dependent.

Metaphors-as-Worlds

What I hope to have shown is that metaphors, as Lakoff argues, are not simply elements of language but are cognitively constitutive of our daily lives. When it comes to imagining alternative futures, metaphors play a foundational and pivotal role such as through Inayatullah's Causal Layered Analysis method. In formulating VPACTS (*Vitality, Purpose, Affect, Complexity, Time and Space*), I wish to point towards how metaphors affect and constitute how we understand the world by posing six prompts or questions. These prompts shed light on different aspects of our experience and point to dimensions that may be overlooked when exposed to metaphors at first. Questions such as what is alive, for what political ends, and to what imagination of space and time, help expand how we think of and feel metaphors. Such an approach rests on Lakoff's insight that knowing how metaphors arise cognitively from our experience and physical embodiment, then reversing it to analyze how metaphors feed back onto our embodied selves. By asking these questions, actors at different levels and policy-making responsibility can better understand not just pervasive metaphors within their domains, but also how those metaphors come to constitute their identities and how they experience and frame the world.

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