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Healing Without Waging War: Beyond Military Metaphors in Medicine and HIV Cure Research

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Abstract

Military metaphors are pervasive in biomedicine, including HIV research. Rooted in the mindset that regards pathogens as enemies to be defeated, terms such as “shock and kill” have become widely accepted idioms within HIV cure research. Such language and symbolism must be critically examined as they may be especially problematic when used to express scientific ideas within emerging health-related fields. In this paper, philosophical analysis and an interdisciplinary literature review utilizing key texts from sociology, anthropology, history, and Chinese and African studies were conducted to investigate the current proliferation of military metaphors. We found the use of these metaphors to be ironic, unfortunate, and unnecessary. To overcome military metaphors we propose to: 1) give them less aggressive meanings, and/or 2) replace them with more peaceful metaphors. Building on previous authors’ work, we argue for the increased use of “journey” (and related) metaphors as meaningful, cross-culturally appropriate alternatives to military metaphors.

Keywords

AIDS; Anthropology; Medical Humanities; Professional Ethics; Research Ethics; Human Subjects Research

Introduction

Violence and warfare have been humanity's constant companions for millennia. The 20th century alone witnessed two unprecedented world wars that claimed almost eighty million lives, followed by a cold war that lasted more than three decades. Due to a long history of conflict, military metaphors have pervaded many human endeavors, including medicine. However, the widespread use of these metaphors in medicine is ironic given that one of medicine's primary goals has always been to save lives and to treat injuries caused by acts of collective violence. Despite this inherent irony, military metaphors are today deeply embedded in the public and professional discourse of medicine and find wide use in public policy and social programs, in clinical practice (Annas 1995, Fuks 2009), and in research, including HIV cure research. Why is it that healers, clinical doctors, and researchers committed to improving health continue to utilize violent metaphors when doing so runs the risk of devaluing human life?

The aim of this paper is to examine critically military metaphors in medicine and the latent but serious problems associated with use of this language and symbolism in HIV cure research. Similar concerns with the proliferation of health-related military metaphors have led previous authors to call for the promotion of less violent alternatives (Bleakley et al. 2014, Fuks 2009, Hodgkin 1985, Lane et al. 2013, Reisfield and Wilson 2004, Sontag 1990). Our analysis extends these arguments for more peaceful alternatives to the nascent HIV cure field by drawing on non-Western traditions of thought from China and sub-Saharan Africa. Given the emergent nature of HIV cure research, ample opportunity currently exists to break with biomedicine's more violent tropes in order to develop and apply metaphors that emphasize human well-being.

More generally, we argue that it is necessary to examine the metaphors embedded and embodied in biomedical discourse whose moral implications are often not scrutinized explicitly. A recent article in the *American Journal of Bioethics* argues for the importance of language in bioethics through an analysis of metaphors used in mass media and popular science to describe and explain CRISPR-cas9, a new technique for genetic modification or "gene editing" (O'Keefe et al. 2015). Similarly, this paper underscores the bioethical importance of the language and symbolism used in relation to new medical technologies and interventions within HIV cure research.

The nature and force of metaphors

Since the 1960's, a vast literature about the nature, function, and force of metaphorical language has emerged (Beardsley 1967, Black 1962, Black 1979, MacCormac 1976, Olney 1972, Ricoeur 1973, Ricoeur 1978, Sewell 1964, Van Niekerk 1983, Wheelwright 1954, Wheelwright 1962). The most remarkable aspect of this new research was the rejection of the conventional idea that metaphors in language are used mostly for ornamental purposes, i.e. in order to add a touch of aesthetical upliftment to otherwise prosaic language. At the level of theory, the ornamental conception of metaphor has increasingly been replaced by interactive and creative theories of metaphor.

Metaphor was originally defined by Aristotle as: “giving something a name that belongs to something else; the transference (‘epi-phora’) being either from genus to species, or from species to genus, or from species to species, or on the grounds of analogy ... metaphors are constituted on the basis of our ability to see the similarity in dissimilars” (Aristotle 1968). In current day theory, it is increasingly acknowledged that metaphor has a cognitive function: it decidedly contributes to the extension of our knowledge of the world. In particular, Paul Ricoeur has emphasized that metaphor opens up an insight into the nature of the world that is only accessible via the metaphor; every effort to paraphrase the metaphor is less interesting than the original metaphorical expression itself (Ricoeur 1973). Compare Shakespeare’s aphorism, expressed by Brutus in the play *Julius Caesar*: “There is a tide in the affairs of men which, taken at the flood, leads on to fortune” (Shakespeare 1993). We do not easily think of “the affairs of men” in terms of tides and floods. The remarkable juxtaposition (“similarity”) of these seemingly unrelated (“dissimilar”) phenomena opens up a new insight about successfully exploiting the fortunate moments in human life that would not have been possible without the metaphor. A correct understanding of metaphor therefore reveals its fundamental and inalienable role, not only in our thinking about the world, but in the way the world discloses itself to us. Metaphor creates new reality, and describes that new reality at the same time (Ricoeur 1973).

Social and Cultural History of Military Metaphors in Biomedicine

Military metaphors in Western medicine date back at least to the 17th century, as evidenced in the writing of John Donne (1572–1631) and the English physician Thomas Sydenham (1624–89) (Lane et al. 2013). Despite Sydenham’s use of “eradicating”, “annihilation”, “battle”, “destroy”, and “attack the enemy” with reference to his approach to the treatment of disease, these metaphors do not accurately represent the dominant discourse of that era (Bleakley et al. 2014). Instead, English medicine of the time, and Sydenham himself, drew more on notions related to “balance” and the humors in approaches to disease (Fuks 2009). Over time, diseases gradually became reified as discrete, targetable “entities” and medical attention shifted away from patients as the objects of interest.

In the 19th century, alongside the rising prominence of Germ Theory, Louis Pasteur (1822–95) adopted and promoted military metaphors of disease and played a key role in firmly rooting them within the larger discourse and practice of medicine (Bleakley et al. 2014). Patients were reduced to the metaphorical battlefields on which physicians would meet, and hopefully defeat, their enemies (Fuks 2009). Indeed, patients came to be seen by medical researchers as “clinical material” (Hodgkin 1985). Cohort, from the Latin *cohors*, originally referred to a Roman military unit, which can be understood as “... a set of identical and ultimately expendable soldiers to be used to the most useful advantage in winning the battle” (Hodgkin 1985, 1820).

Beginning in the early 20th century (and extending to present day), a series of “wars” have been declared to fight various diseases which include most notably acute infectious diseases (World Health Organization 2015), tuberculosis (Lerner 1993), cancer (Cairns 1985), AIDS (Ross 1989), diabetes (Safran and Vinicor 1999), and obesity (Klein 1999). While these “wars” against acute infectious diseases remain unfinished, significant strides have been

made as a result of the invention of antibiotics, anti-retroviral drugs, the widespread use of vaccination and other public health measures, as well as the improvement in living standards. Medical therapies (especially antibiotics) have become weapons; and an “inappropriately aggressive attitude” within medical practice has at times led to unnecessary procedures and over-prescription (Hodgkin 1985).

In the aftermath of WWII, traits associated with recent American victories on the battlefield, namely “determination”, “courage”, and “perseverance”, were transferred to efforts to cure cancer, and surgeons of the day were “only too happy to become the soldiers of the postwar era” (Lerner 2001, 75). Partly encouraged by the success of the moon landing, from the early 1970s the United States launched a massive campaign against cancer, beginning with the National Cancer Act of 1971. Funding advocates of cancer research, both liberals and conservatives, appealed directly to Americans’ sense of military patriotism by asserting that the United States “... must be first in the fight against cancer—just as it was in the fight for freedom” (Patterson 1989, 248). More recently, in the post 9/11 era some cancer patients have come to associate their diseases with terrorism (Reisfield and Wilson 2004).

The anthropologist Emily Martin has written extensively on conceptualizations of the body in the late 20th century (1990, 1992, 1993, 1994). She describes in great detail how lay and scientific understandings of the immune system, as well as HIV, have been shaped by the metaphors of warfare and the nation-state. Today, phrases like the following are so common to medicine that their military connotations pass almost unnoticed: “pathogens (bacteria or viruses) invading or attacking”, “the body’s defenses”, “medical intervention”, “doctor’s orders”, “the magic bullet”, “fighting diseases”, “the patient’s condition is under control”, “the patient is winning or losing the fight”, “medicine as a battle against death and disease”. In the wake of the near miraculous advancements and successes of modern combination antiretroviral therapy (ART), HIV and immune system-linked military metaphors are being revived and given new significance within efforts to find a cure for HIV.

Military Metaphors and HIV Cure Research

On July 19th, 2014 the International AIDS Society’s (IAS) 2014 “Towards a Cure” symposium in Melbourne, Australia started with somber news. Several conference attendees, including previous IAS president Professor Joep Lange, died in a tragic plane crash aboard Malaysian Airlines flight MH17. The flight was brought down by a surface-to-air missile in the Ukraine, having been unexpectedly caught in a war zone. Colleagues, friends, and other conference participants expressed their sorrow. Nevertheless, during the symposium, the commonly used HIV cure metaphor of “shock and kill” was included in several talks. This phrase has been linked to HIV cure research at least since 2004 (Hamer 2004), but was brought to the forefront of the discussion in 2012 after a *Nature* manuscript called “Shock and Kill” (Deeks 2012) was published. Conceptually, “shock and kill” refers to HIV cure strategies that target latent “reservoirs” of HIV within the body. Currently, successful ART is able to suppress HIV viremia to undetectable levels, yet it cannot “eradicate” the virus from the body because of HIV’s ability to hide within cells forming a latent reservoir (Archin et al. 2014). However, HIV eradication might be achievable if drugs can be found which

“shock” latently HIV infected cells into a replicative state so that the virus can be “targeted” and “killed” by anti-retroviral therapy or other cure interventions (Deeks 2012).

While the use of “shock and kill”, “eradication”, and related tropes in the context of the tragedy preceding IAS 2014 might be considered inappropriate, it was hardly surprising given the prolific use of military metaphors in HIV research since the early days of the epidemic. In 1995, Dr. David Ho wrote a widely cited article in the *New England Journal of Medicine* called “Time to Hit HIV, Early and Hard” (Ho 1995). In the article, Ho depicts HIV as a “relentless” attacker that must be met by “early aggressive treatment” in the form of new therapeutic “weapons”. It is also worth noting that “shock and kill” echoes the American military slogan of “shock and awe” (Ullman et al. 1996), defined in the Oxford Dictionary of Phrase and Fable as “...a military strategy based on achieving rapid dominance over an adversary by the initial imposition of overwhelming force and firepower” (Knowles 2006). In 2011, when HIV cure research was first coming into public prominence, some researchers and commentators in the popular media reached for the phrase “shock and awe” when describing the potential for functional cures and new technologies to disrupt HIV latency (Bardi 2011, Chen 2011, Lafeuillade 2011).

These aggressive metaphors for treatment and what must be done to the “enemy” virus continue to dominate the public and professional discourse on HIV. For this reason, HIV cure research offers a unique opportunity to revisit and take stock of the appropriateness of military metaphors. The early days of the HIV epidemic were marked by a “siege mentality” that activism and advances in treatment have gradually helped to temper. To the extent that HIV is a highly treatable, chronic condition, the militarized rhetoric of “attack” and “defense” have become increasingly less apt, and recourse to these metaphors may represent regression toward past tendencies marked by stigmatization, exclusion, and discrimination. The scientific quest to cure HIV, however, seems almost to tempt such metaphorical backsliding. Unlike HIV prevention and its metaphors of “control” and “containment”, HIV cure lends itself much more easily to talk of “annihilation” and “eradication” with its goal to gain complete “victory” over the virus. Given these considerations, the ethical issue for consideration is this: at this particular juncture in the history of HIV, moving from emphasis on prevention and treatment to cure, should military metaphors be resisted?

The Benefits and Perils of Military Metaphors

Military metaphors may have some beneficial aspects. In clinical practice, their use may help to enhance the morale of patients and healthcare professionals alike with respect to the healing process, especially when the problems involved are serious and life-threatening. Indeed, Martin notes how some people living with HIV “embrace warfare imagery wholly and use it creatively to organize their experience of mortal threat” (1990, 419). At the communal level, they may help whole societies to mobilize human, economic, and social resources for healthcare and medical research.

However, despite these advantages, military metaphors have a number of serious drawbacks. For instance, they can reinforce the biomedical model by giving undue emphasis to the physical and biological aspects while downplaying, if not totally ignoring, the psychological,

spiritual, communal, and social dimensions of illness and healing (Annas 1995, Fuks 2009). Furthermore, it has been pointed out that, by silencing patients' voices through erasing their experiences and narratives of illness, the use of military metaphors can hinder the medical profession and society in general in their work of caring for people suffering from the increasing incidence of chronic health conditions (Fuks 2009).

More abhorrently, medical science has been harnessed for nefarious purposes in actual wars, as the inhuman experimentation conducted by German and Japanese physicians and scientists during the Second World War demonstrates (Annas and Grodin 1992, Nie et al. 2010). The exigency of war has been used to vindicate unethical research as exemplified by secret dealings between the United States and Japan for the exchange of data needed to develop more effective biological weapons in the context of the looming Cold War (Brody et al. 2014, Nie 2006). Moreover, the war metaphor has contributed to justifications for unethical research such as the U.S. Public Health Service's studies in Tuskegee and Guatemala. Attempts to win the "war" against syphilis and other sexually transmitted infections led to the deliberate infection of people with these diseases for the purposes of research as "normal exposure" (Reverby 2015).

The most thought-provoking criticism of the use of metaphorical language in medicine, and military metaphors in particular, has been offered not by a medical ethicist or physician, but the American literary critic Susan Sontag – herself a cancer survivor. In her 1978 essay *Illness as Metaphor* (1990), Sontag examines metaphors relating to tuberculosis and cancer to demonstrate how metaphors of illness are deeply embedded within the complex cultural and social milieu of the West. Among the dangers implicit to metaphorical thinking in medicine, she identifies: a shift from fighting the disease to fighting the patient; an increased risk of stigmatization; and a tendency to impose unnecessary suffering on the patient. A decade later, in her essay *AIDS and its Metaphors*, Sontag makes an even more devastating "attack" on the use of the military metaphor: "It overmobilizes, it overdescribes, and it powerfully contributes to the excommunicating and stigmatizing of the ill" (1990, 182).

Beyond Military Metaphors

Although Sontag offers valuable insights on the potential dangers of metaphors – especially military metaphors – in medicine, her prescription for avoiding their perils is somewhat utopian: to eschew not only military metaphors in medical contexts, but metaphorical thinking altogether. In stating the central point of her essays she offers: "...illness is not a metaphor, and that the most truthful way of regarding illness—and the healthiest way of being ill—is one most purified of, most resistant to, metaphorical thinking" (1990, 3). Contrary to traditional literary practice, in writing about illness Sontag advocates for the need "to calm the imagination" and "to deprive something of meaning", i.e. to take up a stance "*against interpretation*" (1990, 102). It is an imperative to regard cancer or any other illness: "...as if it were *just* a disease—a very serious one, but *just* a disease. Not a curse, not a punishment, not any embarrassment. *Without* "*meaning*" (1990, 102; All italics added). Sontag concludes her two penetrating and passionate inquiries into language, illness, and medicine by calling for the complete retreat of military metaphor; paraphrasing Lucretius, to "give it back to the war-makers" (1990, 183).

Sontag may intend to be provocative here, but even so, her suggestion that human beings may be able to think and act without recourse to metaphors seems strange. As a literary critic, she must be acutely aware that human beings cannot think without metaphors or experience the world without importing meanings. Deeply embedded in our languages – whether everyday, literary, or technical – metaphors are essential for humans to perceive, think, and act (Lakoff and Johnson 1980). For the ill, metaphors prove especially useful and valuable because they reify meanings that help to foster communities of shared experience and support (Bleakley et al. 2014, Skott 2002). In fact, Sontag problematically (if not ironically) begins her first essay through use of metaphor: “Illness is the night-side of life, a more onerous citizenship. Everyone who is born holds dual citizenship, in the kingdom of the well and in the kingdom of the sick” (1990, 3).

Abandoning metaphors of illness and medicine altogether is therefore neither a possible nor a desirable endeavor. We propose two approaches to move beyond military metaphors in medicine. One solution to avoid the pitfalls described above would be to transform or redeem military metaphors in medicine by attributing new and positive meanings to them. A second potential remedy, which has been previously called for by others (Bleakley et al. 2014, Fuks 2009, Hodgkin 1985, Lane et al. 2013, Reisfield and Wilson 2004, Sontag 1990), is to develop and put into use realistic and “peaceful”, if not pacifist, alternatives to problematic military metaphors. These new metaphors would ideally serve the same useful functions as their military counterparts, while avoiding negative connotations and other potentially deleterious effects.

In order to consider in greater detail these two potential alternatives to the use of military metaphors in medicine, we turn now to examples from two major non-Western traditions of thought: those of sub-Saharan Africa and China. We do so with the understanding that a change in metaphors is not just a simple shift in the words we use. Instead, such shifts may involve altering our conceptions of disease, our views of the body, and healthcare and medicine more generally.

Reinterpreting Military Metaphors: Insights from Traditional Chinese Medicine and Military Thought

The use of military metaphors in medicine is not merely a Western phenomenon. Traditional Chinese medicine (TCM) also relies heavily on metaphors linked to violence and war, something understandable given war’s essential role in Chinese history. In particular, the foundational concepts of TCM were formulated in the politically turbulent, but intellectually fertile, eras of the Spring and Autumn Period and the Warring States Period (722-221 BCE). *The Yellow Emperor’s Classic of Medicine* (Veith 2002) appeared around the 2nd century BCE (or perhaps much earlier) and was (and is) revered as the highest authority in terms of TCM theory and practice. According to TCM, a person will not fall ill if their body’s harmony remains undisturbed by the “invasion” of *xieqi* (pathological elements) or if, having been invaded, *zhengqi* (the body’s defensive energy) can effectively “defeat” *xieqi* and restore balance. Prevention is therefore critical and the unknown authors of *The Yellow*

Emperor's Classic of Medicine appealed to a range of metaphors, including military ones, to emphasize this point:

In the golden days of old the sages did not treat the disease after it had already set in, but before it began. This resembles [the wise kings and generals] who did not intervene after disorder had already broken out, but before it occurred. Treating a disease after it has begun is like trying to contain disorder after it has broken out. All this resembles digging a well after one has become thirsty and forging weapons after the battle has started. Isn't it already too late then?

The metaphor of “the physician as general” was proposed at a later period (Nie 1996). In the 18th century, the great physician–scholar Xu Dachun (Hsü Ta-ch'un) wrote a celebrated essay entitled *On the Parallels between Prescribing Medicine and Engaging in Military Activity*. He concluded this piece with the astonishing claim that the sum of medical wisdom and the most effective strategies for treating illness could be found in the *Sunzi Binfu* (*The Art of War* by Sun Zi), a military classic of the 6th century BCE (Sun 1963).

Despite these connections, military metaphors in TCM do not necessarily coincide with categories that are familiar today. For instance, the metaphor of “the physician as general” may strike us as paternalistic or authoritarian. However, in its original context, it conceives the relation between physician and patient not like that between a general and a soldier, but between a king and a general. The patient is the sovereign and the physician is the general charged with marshalling the forces of medicine against the disease. In classical Chinese thought on military ethics, wisdom, sincerity, humaneness, courage, and strictness constitute the five cardinal virtues of the general (Sun 1963). The Chinese metaphor of the physician as general suggests that the enlightened healer—like the good general—should know the limitations of his art, remain alert in the face of constant change, cultivate virtue, and carry on the struggle of humanity. Thus the Chinese metaphor differs markedly from Western images of the healer as parent, technician, teacher, fighter, or captain of a ship (Nie 1996).

More importantly, the fundamental philosophy behind Chinese military classics such as *Sunzi Binfu* presents a vision of war that differs from Western military classics such as *The Art of War* by Machiavelli (2001 [1520]) and *On War* by Clausewitz (2004 [1832]) that have shaped popular understandings of war as well as those of military metaphors in medicine. For Sun Zi, the supreme principle of war is to win without fighting, thereby avoiding its attendant destruction. In his chapter on offensive strategies, Sun Zi writes: “Generally in war the best policy is to take a state intact; to ruin it is inferior to this” (1963, 77). He continued: “To capture the enemy's army is better than to destroy it; to take intact a battalion, a company or a five-man squad is better than to destroy them. For to win one hundred victories in one hundred battles is not the acme of skill. To subdue the enemy without fighting is the acme of skill” (1963, 77). In other words, the highest form of the art of war is to wage no war at all. In the same way, as Xu Dachun puts it, the best medicine entails not only minimizing the use of medicine, but making medicine redundant (Xu and [P. Unschuld trans. and ed.] 1998, 183–185).

Therefore, despite the widespread use of military metaphors in the Chinese language and TCM as well as society and medicine in China today, a more nuanced consideration of

traditional Chinese military and medical thought suggests ways of deconstructing these metaphors from within – i.e., the possibility of radically reinterpreting and transforming them by attributing to them different, more positive meanings related to balance, prevention, peace, pacification, and humaneness.

Insights from sub-Saharan Africa

Sub-Saharan Africa (SSA) is a vast and populous continent with more than 3000 languages and 500 tribal entities. Contrary to Chinese history, many peoples across SSA lacked written languages until after the advent of colonization (Ta Neter Foundation 2011). Such cultures were instead characterized by rich oral traditions, yet their beliefs and ways of life were generally described as primitive, inferior, pagan, and in need of correction by colonizing Anglo-Europeans (Wiredu 2004).

While making generalizations is certainly hazardous, an “idealized” version of the worldview, which emerged from SSA, draws on remarkable similarities in customs of peoples living far apart. Although these “traditional” perspectives are under some pressure from globalization, modernization, urbanization, and invasive Western acculturation, the pervading perspective continues to be holistic, with personhood existing as a potential characteristic which each human being may attain in life, depending on her moral actions. These actions in turn hinge on the mutually-constitutive relationship between the individual and community (Mbiti 1989, 141). To illustrate: one is born as “it”, develops and becomes a person, and more of a person as one ages and (to the extent that one) attains wisdom. In the end, a person returns to the spirit-world of the ancestors as a “named” ancestor who gradually, as personal memory fades, merges into a somewhat amorphous spiritual entity (Menkiti 1979, 171). In many African cultures, individuals tend to be constituted through intimate relationships with others, potentially including animate and inanimate natural objects, as well as spirits. The intimacy of relationships between individuals in a “community” is expressed in John Mbiti’s famous citation: “I am because we are, and because we are, therefore I am” (1989, 106). But this ethos also suggests a practical way of living in a community: peaceful co-existence and a special form of sharing, caring, and helping whoever is in need. In southern Africa, this is known as *Ubuntu* (1989).

Apart from more obvious immediate sources, misfortune and disease in SSA are generally considered to have ultimate spiritual or metaphysical causes, often due to some relational disharmony or non-adherence to tribal custom or taboo (the latter, often around sexual practices). Most importantly in this context, disease is seen as part of life, to be accepted – not fought against with military might, as if it had no right to exist (Tangwa 2010, 145).

Since colonization, African cultures have been exposed to European discourses and values. As Western use of military metaphors expanded, these too were introduced and gained currency across SSA, eventually (and particularly) with respect to HIV and AIDS. Military metaphors reflect the Western preoccupation with progress through dominating nature, quite contrary to the traditional African view of peaceful coexistence with nature. They also may be culturally inappropriate as the aim of traditional treatments in SSA tends not to be for “elimination” or “extermination”, but rather “... to coax and plead with the illness to leave

its innocent victim alone” (Tangwa 2010, 58–59). To the extent that a uniform “African” perspective exists, disease tends to be held more as a normal part of nature; as such one cannot and should not wage war against HIV. Instead, individuals and communities should seek to find ways to live with disease in relative harmony. Traditional concepts of disease in SSA therefore encourage us to stop thinking in military terms; disease is not necessarily an enemy, but simply a normal part of life to be managed. Similar to the previously mentioned examples from TCM that demonstrate how military metaphors may be reinterpreted in less confrontational ways, thought traditions from SSA provide a framework from which to develop more peaceful alternatives to currently dominant Western medical metaphors.

The journey metaphor and HIV in Sub-Saharan Africa

The notion of a journey is common to all societies and resonates well with individual and collective experiences of living with a chronic, especially life-threatening illness. With respect to cancer, and illustrating the essential peacefulness, optimism, and orientation towards the future that journey metaphors offer, Reisfield and Wilson (2004) write:

The cataclysm of a cancer diagnosis can compel patients to examine the authenticity of their journeys... can force them to exit the freeway of life on which they had been traveling, often on “cruise control,” often at high speed, often with little thought of anything but arriving at the next destination. The freeway image is typically one of getting to some future state rather than living in the present. The alternate byways imposed by serious illness may involve suffering and uncertainty... the journey continues throughout cancer treatment and beyond. The roads may be bumpy and poorly illuminated at times, and one may encounter forks, crossroads, roadblocks, U-turns, and detours. The pace, route and destinations of the journey may change, sometimes repeatedly. The road may not be as long as one had hoped, and important destinations may be bypassed. But the journey metaphor does not countenance such concepts as winning, losing, and failing. Rather, there are only different roads to travel, various avenues to be explored, and, always, there are exits. Physicians may be trusted and knowledgeable guides, accompanying the patient throughout the journey.

Over the course of the global HIV epidemic, the journey metaphor has become uniquely “Africanized” (Levin 2005). Kobia (2008) describes 23 journey-related HIV/AIDS metaphors amongst Oluluyia speakers in Western Kenya (e.g., he has a bus ticket; he is at the bus stop; he is waiting to board; he has begun the journey; he travels with the disease) and concludes that this metaphor warns against infection and gives hope to sufferers, since this journey (one that ends in death) is of long duration. This has similarly been described in other parts of Kenya (Nyakoe et al. 2014). Here the journey metaphor may also be understood to account aptly for HIV/AIDS illness experiences and the progression of the disease through different stages. During this journey, a patient’s lifeways may stray from intended paths, or veer to alternative destinations, yet solace may be found through the interconnectedness of human lives and passage together.

A variation of the journey metaphor is ascribed to the former Zambian president Kenneth Kaunda who stated that it was more important to know where the disease was going than to

wrangle about its origins (Magonya et al. 2013). Additionally, when AIDS denialism was rampant in South Africa, the journey metaphor was persuasively used to mobilize public opinion and to force an acceptance of scientific reality (Nothnagel 2009). Former President Thabo Mbeki and his Minister of Health, Manta Tshabalala-Msimang, were also depicted as travelers on a path of discovery for effective treatment and eradication of HIV – their anti-scientific, denialist stance an impediment to reaching their destination (Nothnagel 2009).

New Metaphors for HIV Cure Research and Biomedicine

The early stage of HIV cure research allows for unique opportunities to map a new language and conceptual terrain onto the biomedical field. Although military metaphors may generate excitement that draws attention (and funding) to the issue, they also introduce tension and may be problematic. If less fraught alternatives exist, why have they not gained more traction?

The journey metaphor is one of the most pervasive cognitive linguistic expressions in the English language – so ubiquitous that we use it daily almost unconsciously (e.g., I have to move on; get to a point; my life took an unexpected turn; my life has no direction, etc.). It is equally prevalent in literature (Bunyan 2014 [1678], Cervantes Saavedra and Grossman 2003 [1605]), films (Radford 1994), poetry (Neruda 1933), and religion (e.g. the *Hajj* or pilgrimage to Mecca). It has universal appeal because humans readily relate to the metaphor of the physical journey, with the body as the vehicle of travel. Furthermore, it is peaceful, future-oriented, focused on the process and the means, open to new positive opportunities, and devoid of confrontational references.

The journey metaphor, which has been employed extensively in SSA to frame both individual and collective HIV illness experiences, may be a useful alternative to military metaphors within biomedicine, including HIV cure research. The metaphors we call on should be innovative and contextually attuned to the reference worlds of all the diverse stakeholders involved, including funders, researchers, research participants, people living with HIV (PLHIV), and others. For instance, “on the road to a cure”, effective treatment, the first cure, a functional cure, and the global roll-out of interventions, would all be major milestones. Interim highpoints or stopovers might include the discovery of an effective vaccine or successful proof of concept clinical trials.

For both HIV cure researchers and PLHIV, shifts toward more peaceful language – following examples from TCM and Chinese military thought (e.g., pacification) and from SSA (e.g., coexistence; HIV as a part of the natural order) may be particularly helpful. For instance, it may be easier for patients to accept living with, rather than constantly fighting HIV. Instead of warring against HIV, maybe we should instead seek a truce and ongoing peace. For researchers, eradicating HIV from the body may not be possible in our lifetimes (or at all). Language that inspires more peaceful frames of acceptance, tolerance, and coexistence may in fact be more realistic and help to temper already too high expectations for finding a “cure” and what that cure will mean. Some military metaphors may be reinterpreted or repurposed to more peaceful ends. Similarly, a more reasonable strategy may be to channel some of the energy of military language towards nonviolent concepts in

order to draw attention away from conflict and towards peace. Examples might include “waging” peace or depictions of HIV not as a combatant or terrorist, but instead as a companion or sidekick on life’s path, a conceptualization that does not rule out the potential for mishaps, frustration, fatigue, or feelings of being burdened.

Conclusion

Careful consideration must be given to the language and symbolism we employ in medical research and patient care since these metaphors hold the potential to create either hope or despair. The use of military metaphors in medicine, including those employed in HIV cure research, seems ironic, unfortunate, and unnecessary. Their use is ironic because the respective aims of the arts of healing and war are in conflict – to save lives versus to kill and destroy. It is unfortunate because military metaphors can inadvertently further stigmatize patients, inflict additional suffering on them, and endorse the legitimacy of war and violence in social and political life. Furthermore, far from being useful, the application of military metaphors is unnecessary because more positive alternatives are available, but underutilized.

Given their long history and strong, and continuing, cultural resonance, however, there seems little reason to believe that military metaphors will fall into disuse any time soon unless similarly powerful and relatable alternatives can be popularized among researchers and the public. Metaphors are not just turns of phrase, but also reflections of (what Foucault would call) discourses, i.e. established social practices and power relationships. If public health, biomedical research, and clinical practice are permeated by military metaphors, this says something about how their practitioners and institutions see themselves, think, and act. Perhaps more peaceful or pacifist metaphors, including HIV cure as “journey”, offer adequate alternatives as first steps towards a more comprehensive demilitarization. This remains to be seen. Moving forward, the interests of patients, researchers, PLHIV, and other stakeholders may be better served if their thoughts and experiences are taken into account and if their voices are more formally included in this discussion (Fuks 2009, Reisfield and Wilson 2004). If this is to be more than an esoteric exercise in political correctness, concerted efforts among all stakeholders will be needed to eschew violent metaphors in favor of those more closely linked to acceptance, co-existence, healing, and human well-being. Brute military action in certain circumstances may be the only way to preserve (some) lives; but that does not justify the habitual and unreflective use of military language when promoting health in civilian contexts. At the very least, increased mindfulness for language, and its potential consequences, should be encouraged among all HIV stakeholders.

An important area that has not been emphasized in this paper, but certainly warrants future scholarship concerns the role of military metaphors in first-person patient narratives. According to a pioneering study on illness narratives (Hawkins 1993), metaphors of battle and journey (journey as mostly military adventure, thus being different from what we have proposed) are ubiquitous; yet surprisingly, ambivalent attitudes have been taken toward these metaphors by others, including Frank’s (1995) influential sociological and ethical account from patients’ perspectives ... We hope that our paper contributes to the call for an increased uptake of more peaceful medical metaphors among patients and research and

healthcare professionals. Such alternatives, we contend, cannot help but improve patients' abilities to understand, articulate and conceptualize and live with their individual and collective experiences of illness and healing.

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