

THE CONCEPTUAL METAPHOR *CHANGE IS MOTION* AND ITS EXTENSION IN SCIENCE FICTION

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AUTHOR'S CONTRIBUTION

The sole author designed, analyzed and interpreted and prepared the manuscript.

Received: 27th January 2016

Accepted: 1st March 2016

Published: 19th March 2016

Original Research Article

ABSTRACT

The argument and objective presented in this paper is that the ideology of *change* in the unique genre of science fiction is expressed in the key/primary/background/source conceptual metaphor *Change is motion/movement* which refers to human evolution (physical, mental, psychological), socio-political and scientific-technological progress, and extends to form numerous conceptual sub-metaphorical variations which are conditioned and motivated by the same social and scientific-technological functional orientations as the key metaphor. *Change is motion* thus is identified as a multifaceted “classical” science fiction conceptual metaphor which allows a number of micro-interactions between cognition and imagination and is open to wide research. To achieve this objective, different science fiction sources have been selected and Lakoff’s conceptual metaphor identification method has been applied for the analysis of the data to conclude that the primary formulaic conceptual metaphor *Change is motion* demonstrates immense generative power in science fiction going far beyond its original model, extending into a large variety of conceptual sub-metaphors underlying and referring to some other concepts of cognition reflected in certain parts of science fictional contexts. My proposition will be that *Change is motion* not only reigns supreme in science fiction but also testifies to broad scientific-technological, social, cultural, political, physical, mental, psychological and many other transformations, modifications, transferences, replacements or substitutions of our information age.

Keywords: Science fiction; ideology of change; conceptual metaphor; change is motion; extension of conceptual metaphor.

1. INTRODUCTION

Metaphors are valuable tools for intervention in any sphere of research, including the linguo-stylistic investigation of discourse where it is important for the researcher to decide early in the research process which of the three perspectives of metaphor; metaphor as a phenomenon of language (1), metaphor as a phenomenon of thought (2), metaphor as a phenomenon of both language and thought (3) is

being applied and then consider the implications of that decision [1:8]. Considering that metaphor, “a device for seeing something in terms of something else” [2:503], is used in every variety of science fiction discourse to realize two very important functions derived of the register’s ontological juxtaposition of factitiousness and fictitiousness: to cognize patterns of thought and bring literary imagery to life, the third perspective seems to be the fittest approach to the study of metaphor in science fiction.

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The questions *Only in science fiction?* or *Why not in mainstream fiction?* are besought here. The answer is that in mundane fiction there may and will be cognitively banal or empty but emotionally strong creative metaphors which make a strong aesthetic impact on the reader, whereas in science fiction all metaphors are, to a certain extent, related to cognition. This conversion of imagination and cognition is the direct reflection of the reason vs. emotion interaction which is undeniably a must for science fiction as a discourse [3].

The role of language as a tool for conceptualization of reality and conceptual *change* is undeniable. That many different concepts are represented metaphorically has been claimed by many researchers of conceptual metaphor [4-9,1,10,11]. Conceptual metaphor study has suggested that metaphors as “abstract models of reality” [12] are based on concepts of experiential domains of knowledge represented metaphorically and “reflected in vast sets of verbal metaphorical expressions that can be readily identified and organized” [13]. *Change is motion/movement* thus is identified as a multifaceted “classical” science fiction conceptual metaphor which allows a number of micro-interactions between cognition and imagination and is open to wide research. Analyzing science fiction metaphor from the perspective of the ideology of change and the key/primary/background/ source conceptual metaphor *Change is motion* serves as a source and gives access to other mental models provided by language to express the general science fictional rational-imaginative ontological juxtaposition in science fiction metaphor. As an interpretive tool, it links image metaphors to larger patterns of meaning, including creative frameworks readily available in human emotional realm.

Thus, my central concern will be to offer an adequate theoretical frame for the science fiction key conceptual metaphor *Change is motion* and its extensions/variations by analyzing and interpreting the mutual reciprocities between the mentioned primary conceptual metaphor and conceptual sub-metaphors as a reflection and realization of the ontological juxtaposition of reason and emotion. My proposition will be that *Change is motion* not only reigns supreme in science fiction but also testifies to broad scientific-technological, social, cultural, political, physical, mental, psychological and many other transformations of our information age.

2. THE IDEOLOGY OF CHANGE

Change as a central notion functions universally in science fiction and has become a basis for the ideology of the genre [14]. The ideology of change

has been a basic premise and a constant presence during all the phases of development of science fiction. In John Campbell’s words (quoted by B. Fowler) “SF unlike other literature assumes that change is the natural order of things” [15]. In an interview to *Science Fiction Writers of America Bulletin* A. Asimov [16] claims that “modern science fiction is the only form of literature that consistently considers the nature of the changes that face us” and “is concerned with the impact of scientific advance on human beings.” According to R. Heinlein (quoted by H.L. Drake), the “future fiction” (science fiction) deals with change and both science fiction authors and fans are well aware of and impacted by it [17]. The same idea is expressed in the following quote of J. Gunn [18] “Science Fiction is the branch of literature that deals with the effects of change on people in the real world as it can be projected into the past, the future, or to distant places. It often concerns itself with scientific or technological change, and it usually involves matters whose importance is greater than the individual or the community.” In the same way A. Goswami [19] claims that science fiction “contains the currents of change in science and society” and is against “static scientific paradigms”. Besides, as S.H. Elgin puts it, “provides one of the best ways of examining the rapidly changing world around us” [20].

The 21st century theoreticians, emphasizing the role of *change* in science fiction, consider the genre a literary form based on “change as evolution, progress” [21:528], “the literature of change – in human condition and in the universe as a whole”, a variety of fiction that propagates and spreads “the ideology of change” [22]. Others go so far as to offer to rename the genre “literature of change” and to attach more significance to psychological change in our fast moving computer reality [23].

The ideology of change is usually expressed and functions in present, past, future time-space paradigms. In most cases scientific-technological change results in socio-political and psychological changes. Many science fiction writers are hopeful that change will mold a perfect social model and a harmonious social system. Even disastrous changes (dystopias) are means to persuade humanity to stop the destruction and undertake new changes through which to secure human existence and survival on our planet and in the universe. In John Kessel’s [24:848] words “SF changes the world for the better.” O. Butler [25:7], being more creative, declares “God is Change”.

Thus, change represents not only a key concept in science fiction ideology but also a functional tool

through which the basic cognitive strategies of science fiction – scientific, technological, physical, psychological, linguistic, socio-political, historical, cultural positive/progressive or negative/regressive changes are expressed through the conceptual metaphor *Change is motion/movement* and its metaphorical extensions/variations which are both cognitive and imaginative.

3. CHANGE IS MOTION AND ITS EXTENSIONS / VARIATIONS

In their classic book, *Metaphors We Live By*, Lakoff and Johnson [7] identified the cognitive/conceptual structural metaphor which is implicit in the organization of a vast number of English sentences and is considered to be not only deeply rooted in our cognition, and absolutely central to it, but also “automatic” in the sense that it has, over time, become part of ordinary language to such an extent that we are not even aware that we are using a metaphor. Furthermore, the conceptual view of metaphor sees it as a cognitive instrument which is fundamental in conceptualizing the world around us. Conceptualization functions through metaphor mapping across conceptual domains or “semantic fields” [26]; from the source domain, which is usually concrete, to the target domain, which is usually abstract [7;29]. The target concept is usually characterized by the source concept (*motion* characterizes *change*), and to understand the metaphor, the mapping applied to source-target pairing and the discursive and stylistic influences that bear upon mapping processes must first of all be comprehended. Both the mapping and its comprehension are always bound up with social, historical, cultural, technological, linguistic, political, philosophical and individual commitments.

The mapping is based on pre-linguistic image schemata referring to motion, change, space, time, intellect, emotion and many other essential constituents of human existence and experience. It is my supposition that all science fiction is based on the conceptual metaphor *Change is motion/movement* which may be said to have generated from the progress image schema. This metaphor belongs to the most widespread type of conceptual metaphor – the event structure metaphor which moves from the source domain of space to the target domain of events and has a universal public orientation, i.e. is closely connected with and is applied to human evolution, universal socio-cultural and scientific-technological development, and to “deculturation”, which first and foremost envisages adaptation and change. The same orientation is observed in its functional variations which display different degrees of metaphoricality in

different contexts. Like all the other event structure metaphors, *Change is motion* is not culturally restricted – it is universal in almost all languages (for more comprehensive description of conceptual metaphor and image schemata see [27-29]). The progress image schema in its turn has developed from the physical or mental experience of functioning/acting/moving. Human experience usually envisages change as forward movement, progress, advancement, evolution, growth. This positive/progressive change is expressed in the conceptual metaphors: *Change is progress/ advancement*, *Change is forward motion*. *Scientific/ technological change is progress*, *Progress is forward motion*, *Progress is advancement*. However, the reverse direction, i.e. a backward movement, retrogression, devolution, fall, setback is also considered to be a change. And this negative/regressive change is especially relevant in science fiction dystopias in which *Change is retrogression / regression*, *Scientific / technological change is destruction* (both physical and psychological), *Scientific / technological progress is emotional / psychological regress*.

According to science fiction writer Ben Bova [30:21], “with fire humankind’s technology was born” to protect and keep civilization going but then “it led to the development of a technology that is now itself a threat to our survival on this planet.” The conceptual metaphor *Scientific / technological change is destruction* or *Technology is a threat to our survival* are typical of the discourse context (1) where the destruction instrument is an armoured juggernaut self-controlled by an electronic guidance system:

- (1) *No human being should have been alive in the nightmare world of flame and deadly gas and electronic destruction. The earth had been roiled and heaved again and again, soaked by the poison rain, turned into a moonscape of despair under the rumbling, lightning-pierced sky [31:107].*

The conceptual metaphors *Change is progress/ advancement* or *Scientific/technological change is progress* underlie (2) – a passage from A.D. Foster’s story [32] about the dream of a young woman and an intelligent horse living on one of the many planets of the galaxy and still carrying in their veins the memory of the “Old Earth” which, because of people who controlled the power of science and technology, had turned into a desolate planet with toxic air and water (*Scientific/technological change is destruction*). However, it was the same technological progress in chemistry and bioengineering (*Scientific/ technological change is progress*) that enabled the heroes take the next evolutionary step: clear the water,

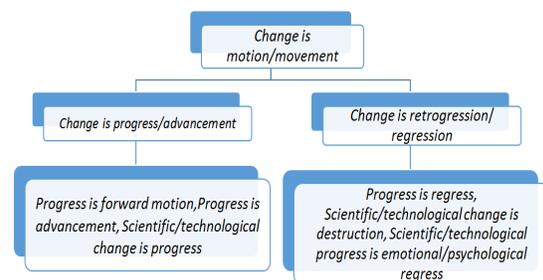
cleanse the atmosphere, reintroduce flora and fauna and move there to realize their poetic dream of riding over the green land towards the mountains:

- (2) *The oceans were cleared, the laborious, incredibly costly first step. That done, with a little help from two thousand chemists and bioengineers, the atmosphere began to cleanse itself. The first new air was neither sweet nor fresh – but neither was it toxic. Grasses are the shock troops of nature. Moved in first, the special tough strains took hold in the raped soil. Bacteria and nutrients were added, fast-multiplying strains that spread rapidly. From the beachheads near the arctic and in the high mountains flora and fauna were reproduced. [...] Gave her back the small part of the dream that was hers. Tail flying, hooves digging dirt, magnificent body moving effortlessly over the rolling hills and grass, the horse became brother to the wind as he and his rider thundered off toward the waiting mountains. The poetry, you see, was when he moved [32:93].*

Thus, the ideology of change conditions the typically science fictional conceptual metaphor *Change is motion* which is in harmony with the technological, social and historical setting and with the beliefs and personal constructs of the society or a micro-society. The extensions/variations refer either to the notion/target concept *change* or to the notion/source concept *motion* and are conditioned/motivated by the same social and scientific functional orientations as the primary conceptual metaphor *Change is motion* with its two main opposing extended sub-metaphors – *Change is progress/advancement* vs. *Change is retrogression/regression*. Among other variations which include either the notion of *change* or the notion of *motion* I recall: *Action is motion, Action is self-propelled movement, Change is motion in time, Change is motion in location, Change is forward motion, Change is transformation, Change of state is motion, Change of thought is change of direction, Emotion is motion/power, Emotional/psychological change is self-propelled motion, Evolution/change is progress, Evolution is blind motion, Future is motion, Industrial operations is movement into space, Progress is forward motion, Progress is advancement, Progress is regress, Self-initiated change is an aim, Scientific/technological change is progress, Scientific/technological change is destruction, Scientific/technological progress is emotional/psychological regress, Time is motion/change, Time is the process of change, Transformation is motion, etc.* There are other conceptual metaphors which are not extensions of the given key metaphor as they refer to

other concepts of cognition but are nonetheless typical of science fiction and are reflected in certain parts of science fictional contexts. See, for example: *Acts are consequences, Death is an end/termination, Death is another beginning, Existence is a living form, Faith/purpose is a driving force, Fire is the basis of all technology, Immortality is a dream, Immortality is a burden, Intelligence is accidental, Intelligence is not survival without sufficient purpose, Revolution is evolution, Society is an existing form, The only defense against man is man, The primary interest of business is growth and dominance, There is a purpose in the development of intelligence, The pressure of social history is punishment of industry off planet, The end of war is surrender to the strongest, etc.* It is my own science fiction reading and studying experience that resulted in these generalized conceptual metaphors (hence some of them may sound somehow subjective), still others are picked up from different modern science fiction works. The source of data encompasses the New Wave and Cyberpunk/Postcyberpunk science fiction writings (1970s – to this day) of B. Aldiss, G. Anthony, P. Anderson, K. Applegate, A. Asimov, M. Bishop, J. Blish, J. Brunner, A. Davidson, S. Delany, P. Di Filippo, H. Ellison, W. Gibson, J. Kessel, D. Knight, R. Lafferty, U. LeGuin, F. Leiber, L. Niven, F. Pohl, R. Silverberg, G. Wolfe, J. Wyndham, R. Zelazny and others which are at large characterized by artistic sensibility, philosophical insights, different stylistic modes of expression and avant-garde techniques of argumentation. Other examples of conceptual metaphor, referring to different concepts of human cognition but also typical of science fiction, can be found in the Conceptual Metaphor Homepage [33]. Even if in most instances the conceptual metaphors I have mentioned, and many others, are not verbally presented in the context, they are mirrored in the minds of both the science fiction writer and the reader, helping the former shape his/her creation and the latter comprehend it [34].

The mentioned hierarchy can be presented in the following diagram which includes only the most typical examples of science fiction conceptual metaphor/sub-metaphor:



4. CONCLUSION

What can thus count as a key peculiarity of all science fiction is that the genre is based on the ideology of change which is expressed in the universal science fiction conceptual metaphor *Change is motion* and its extensions, all of which are grounded in human experience. The key metaphor and the extensions are discussed as a case to lend plausibility to this hypothesis. My approach tends to strengthen arguments that science fictional *change* is expressed in conceptual metaphors and sub-metaphors referring to human evolution (physical, mental, psychological), socio-political and scientific-technological and other real and imaginative changes. Hence, the mentioned typicality suggests that the conceptual metaphoric mapping of *Change is motion*, derived from mental experiences and implicitly or explicitly preserving the Aristotelian two-part model (A is B), extends and restructures, turning into a multiple, complex, fanciful variations of sub-metaphor underlying and reflected in certain parts of science fictional contexts. Besides, the findings of the conceptual metaphor data presented in this paper support the claim that many abstract concepts are structured by multiple grounded metaphors and that the identified metaphorical models are language-based. Finally, it is important to point out that proposing the appropriation of language-based metaphorical models as a component of the ideology of science fictional *change* addresses the recent call for bridging cognitive and creative approaches.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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