Using Metaphors in Sociology: Pitfalls and Potentials

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Abstract

Two main points are made in this paper about the use of metaphors in sociology. The first is that metaphors have a strong heuristic or suggestive power that can also be increased. The second is that metaphors can lead you wrong; but there exist some easy ways of proceeding to prevent this. In both cases the paper emphasizes the practical dimension of working with metaphors. The following topics are discussed as well: how to construct a new sociological metaphor; how to add to an existing one; and what exactly happens when you are led astray by a metaphor. By way of background, the paper introduces the reader to the current state of the discussion of metaphors which is interdisciplinary in nature. The ideas of I.A. Richards are singled out as being especially helpful to sociologists.

Keywords Metaphor · Theorizing · Heuristics · Personification · Anthropomorphism

Metaphors are often used by sociologists.[1] They are part of its paradigms and concepts as well as the language that is used in sociological articles and monographs. While the role of metaphors in sociology has been discussed in a few writings, most of these are somewhat dated (e.g. Meadows 1957; Stein 1963; Nisbet 1969, 1970; Brown 1976, 1977).[2] More importantly, they do not address the two central themes of this paper, which can be summarized as follows. First, metaphors have a very strong heuristic or

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[2]For exceptions, see e.g. Turner and Edgley 1980, Rigney 2001. There also exist a few articles on the role of specific metaphors as well as their role in various sub-areas of sociology, such as organization theory, the sociology of religion, and so on (for the former, see e.g. Levine 1995, Silber 1995; and for the latter, e.g. Cornelissen 2005, Morgan 2006, Liljegren 2012, McKinnon 2012, Örtenblad et al. 2016). For a study of the use of human ecology as a master metaphor in sociology, see e.g. Gaziano 1996; for networks as a metaphor, see e.g. Erickson 2012; and for the use in sociology of metaphors from chemistry, see e.g. Sousa Fernandes 2008.

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suggestive power that can also be increased. Second, while metaphors can lead you badly wrong, there do exist some easy ways of proceeding to prevent this.

In both cases the paper emphasizes the practical dimension of working with metaphors. The following topics are touched on as well: how to construct a sociological metaphor, how to add to an existing one, and what exactly happens when you are being led astray by a metaphor. By way of background, the paper introduces the reader to the current state of the discussion of metaphors which is interdisciplinary in nature. As will be shown in the next section, the ideas of I.A. Richards are especially helpful to sociologists.

What Is a Metaphor and What Is a Sociological Metaphor?

In the theoretical literature on metaphors it is often mentioned that the term metaphor comes from the Greek word *metaphero*, which means "to transfer or carry over" (e.g. Theodorou 2019). A reference is typically made to Aristotle, who described the metaphor as a "*transference*" of meaning from one subject to another.[3] Today, according to various dictionaries, a metaphor is typically defined as follows: "*metaphor* - a figure of speech in which a word or phrase literally denoting one kind of object or idea is used in place of another to suggest a likeness or analogy between them (as in drowning in money)" (Merriam-Webster 2019; similarly e.g. Cambridge Dictionary 2019, Oxford English Dictionary 2019).

While this definition, as most dictionary definitions, refers to the everyday understanding of what a metaphor is, there also exist attempts to look at the metaphor in an analytical way. The modern attempt to create a theory of the metaphor began in the early 1900s. In the 1950s, when philosopher Max Black wrote what is still regarded as the standard article on the topic, most of the authors who had been interested in this topic were either philosophers or literary critics (Black 1954). The situation is different today, even if philosophers and literary critics are still active in the debate about metaphors (e.g. Ricoeur 1977, Davidson 1978, Searle 1979, Hesse 1966, Goodman 1976, Eco and Paci 1983, Sontag 1988, Borges 2000:Ch. 2, Blumenberg 2010). Important new contributions have, however, also been made by cognitive scientists, historians of science, and neuroscientists (e.g. Kuhn 2000; Gentner et al. 2002; Hills 2017; Lai et al. 2019). This situation is well reflected in two voluminous handbooks on metaphors that exist today (Gibbs 2008; Semino and Demjén 2017).

It is clear from Black's discussion that it is not easy to define what a metaphor is and how it operates (Black 1954, 1962, 1979). While the metaphor has some features in common with the simile and the analogy, it is not identical to either of these. The formal difference between a metaphor and a simile is that the former asserts an identity while the latter includes the word "like". "Juliet is the sun" (Shakespeare) is a metaphor; "Juliet is like the sun" is a simile. The analogy describes a situation where one phenomenon ("the target") is similar to another phenomenon ("the source"; e.g.

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[3] Aristotle's best-known statement on the metaphor reads: "Metaphor consists in giving the thing a name that belongs to something else; the transference being either from genus to species, or from species to genus, or from species to species, or on grounds of analogy" (*Poetics* 1457b 6–9). Aristotle's main passages on the metaphor can be found in *Poetics* (1457b 1–30) and *Rhetoric* (1404b, 1406b, 1410b; Aristotle 1926, 1995). For a discussion of Aristotle's view of the metaphor, see e.g. Arendt 1978:98–110, Levin 1982, Kirby 1997.

Gentner 1999). In an analogy, there is in other words much less of a semantic distance between its two constituent parts than in a metaphor. The focus is primarily on a comparison between the source and the target.[4]

In his article from the 1950s Black also presents his famous typology of theoretical approaches to the metaphor. These are: (1) the substitution view, (2) the comparison view, and (3) the interaction view. According to the substitution view, what a metaphor says could equally well have been expressed in a more prosaic manner, without the help of the metaphor. The reason for using a metaphor is simply that it livens up the material. The comparison view is centered around what two items have in common. It shares with the substitution view the notion that nothing new has been added by using a metaphor. The interaction view was first formulated by literary critic I. A. Richards, who is the founder of the modern theory of the metaphor (Richards 1936). In his view, a metaphor is the result of an *interaction* between two sets of meaning. In "Juliet is the sun" there is one set of meanings that comes with Juliet, and another with the sun.

The interaction view is still regarded as the most promising way to understand how a metaphor comes about, while the substitution view and the comparison view have few supporters. Exactly what happens in the meeting between the two sets of meaning when they "interact" is however not yet understood. But there does exist some novelties in the understanding of the metaphor that have been introduced since Black's article. It has, for example, been suggested that metaphors are not only used when people speak or write but also when they think. Especially George Lakoff and his collaborators have made this argument, which is known in the literature as the theory of the conceptual metaphor (e.g. Lakoff and Johnson 1980).[5] Several modern scholars also make a distinction between live and dead metaphors. Related to this, there exist theories of the career that a metaphor goes through. It is first experienced as original, then as conventional, and finally as being so common that it is not noticed at all (e.g. Bowdle and Gentner 2005).[6]

In recent scholarship it is also emphasized that metaphors are extremely common in everyday language (e.g. Goodman 1976:80, Lakoff and Johnson 1980). According to one source, for example, people use a metaphor every twenty words (ScienceDaily 2019). Metaphors are also much more common in literature than was earlier thought. Just in the writings from eighteenth century England, for example, you can find more than 10,000 metaphors for mind (Pasanek 2015:ix). Metaphors are also used very often in science. "Metaphors are pervasive in the language of science", to cite a common opinion (e.g. Taylor and Dewsbury 2018).

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[4] In dictionary definitions of the metaphor it is sometimes said that a metaphor can be described as an analogy or likeness. This is, for example, the case with the definition from the Merriam-Webster Dictionary that was earlier cited. What is meant here is in both cases identity. The words "like" and "analogy" can in everyday language mean both "just as" and "in some respects similar to."

[5] To illustrate what he means by a conceptual metaphor, George Lakoff asks the following question (which he answers with "yes"): "Do we use inference patterns from one conceptual domain to reason about another conceptual domain?" (Lakoff and Johnson 2003:246).

[6] A mention should at this point also be made of IARPA's ambitious Metaphor Program (2011-), which represents an attempt to reconstruct the way that people think by studying the metaphors they use (e.g. Madrigal 2011). The theoretical foundation for this program comes from Lakoff's theory of conceptual metaphors, used in combination with a big data approach. So far it would seem that little progress has been made in this project (e.g. Albro 2018).

Despite all of this recent scholarship, there still does not exist a generally accepted theory or definition of what a metaphor is. Most scholars simply refer to its expressive power and that this is somehow best explained by the interaction view. In other words, the theory of Richards, as summarized by Black, still stands.

But Richards had quite a bit more to say about the nature of the metaphor than what Black brings up in his famous article. Besides trying to explain how the expressive effect of a metaphor is produced, Richards also discussed which parts make up a metaphor; and what he said on this topic is very useful for the purposes of this paper (Richards 1936). A metaphor, he argued, can be conceptualized as consisting of two parts: *the primary subject* and *the secondary subject*. When these two are brought together, the result is *the metaphor itself*. In the example "Juliet is the sun", Juliet is the primary subject; the sun is the secondary subject; and *the full expression* is the metaphor itself. This terminology is important and will be used in the rest of the paper because it makes clear what should be meant by the term metaphor, namely the metaphor itself and not the secondary subject. These two are often confused in everyday language; and this can create problems when a metaphor is used for scientific purposes. For definitions of the terms that have just been introduced, see Appendix 1.

Even if Richards' terminology is useful, it needs to be added to for the purposes of this paper. This can be done by introducing a term for what the metaphor actually says. A metaphor (the metaphor itself) has a basic meaning that can be called its *substitution meaning*, and this is always approximative. In "Juliet is the sun" the basic meaning of the metaphor or its substitution meaning is *approximately* that Juliet brings light and life to Romeo. Other meanings are possible, but are centered around something along these lines.

As will be shown later in this paper, it is very useful to have the notion of substitution meaning in mind whenever you work with a metaphor in social science. The reason for this is that it allows you to benefit from a metaphor without being deceived by it. It is also very helpful to have the substitution meaning in mind when you deal with a metaphor that has been worn out. When this is the case, the substitution meaning helps you to realize that there is now a danger that the secondary subject and the primary subject will be seen as identical in some respect.

What accounts for the confusion that a metaphor can create is that the primary and the secondary subjects are at the same time identical and *not* identical. A = B and A ≠ B. The metaphor states that Juliet is the sun, something we accept. But we also know that she is *not* a sun. She is not a star, made of burning plasma. In a metaphor, in brief, there is a contradiction between the form and the meaning; and not realizing this can lead to serious problems, as we soon shall see.

Some Helpful Distinctions when Discussing Sociological Metaphors

If we now turn from the general theory of the metaphor to the specific topic of sociological metaphors, it may be helpful to begin by introducing a few distinctions. There exist, for example, important differences between the kind of metaphors that are used in everyday language and those that are used in a scientific analysis. In everyday language metaphors are typically used without thinking. "He fell in a deep depression", "she is coming out of the coma", and the like (e.g. Lakoff and Johnson 2003:32).

In a scientific analysis, in contrast, metaphors are used in a more conscious way. They also have a different purpose, namely to advance the understanding of some scientific problem. The metaphor of the brain as a computer, for example, has according to many scholars played an important role in the development of cognitive science (e.g. Gardner 1987:40–1, Pribram 1990:85–8). But even if scientific metaphors are instrumental in character, they are still metaphors. This goes for sociological metaphors as well.

Like everyday metaphors, scientific metaphors can be invisible. This is, for example, the case when they have been used for a long time. When scientific metaphors are new, on the other hand, they can have a startling effect, just like a new metaphor in everyday language.[7] What causes this effect in the case of scientific metaphors, however, is a sudden expansion of one's understanding of something that is relevant to science, not a sudden expansion of the meaning of something that relates to everyday life.

A complication when it comes to sociological metaphors is that sociologists often use terms that are at the same time part of everyday language. By simultaneously being part of everyday language and scientific language, metaphors used in sociological texts often lead a kind of double life; and no sharp line can be drawn between the two (e.g. Bourdieu et al. 1991:22–3).

Sociological metaphors sometimes originate in everyday life and then migrate to sociology, as exemplified by such terms as role and stigma (e.g. Merton and Wolfe 1995). But it can also be the other way around, with sociological metaphors entering everyday language, which is the case with such expressions as social movement and social structure. And when metaphors move from one context to another, they often change in meaning (e.g. Richards 1936).

A second distinction that can be useful to make in a discussion of the role of metaphors in sociology, is between their use during the creative stage of the research process, on the one hand, and during the stage of writing up the results, on the other. Here, as elsewhere in sociological analysis, it is important to realize that what works well in the former, does not necessarily do so in the latter. The reason for this is the following. As the analysis unfolds in a research project, metaphors can play an important heuristic role by suggesting various hypotheses and ideas to work with. In the text that is the end product of a research project, on the other hand, metaphors should play much less of a role. At this stage hypotheses and ideas, which have their origin in a metaphor, should have been tested. They should also as far as possible have been recast in non-metaphorical language, that is, the substitution meaning and not the metaphor (the secondary subject) should be referred to.

It can also be useful to make a distinction between scientific metaphors that are paradigmatic in nature and those that are used in normal science. The former deal with the basic approach in a science: which problems to look at, and how to do so. Examples include society as an organism, a social system or a human ecology (e.g. Parsons 1951; Levine 1995; Gaziano 1996). But there also exist metaphors with a much more narrow scope, what can be called middle-range metaphors. Examples of this would be

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[7] According to Max Black, "the meaning of an interesting metaphor is typically new or 'creative'"; and according to Nelson Goodman, "the good metaphor satisfies while it startles" (Goodman 1976:79, Black 1979:23).

expressions such as white-collar crime (Sutherland), role-set (Merton) and the strength of weak ties (Granovetter).

Sometimes middle-range metaphors have their origin in a paradigmatic metaphor, which then functions as a kind of root metaphor. Besides viewing society as an organism, a system and a human ecology, it can also be seen as a machine, a theater and a network (see Fig. 1). In cases of this type there exists a link between paradigmatic and middle-range metaphors, which is not always obvious to the user. Some middle-range metaphors are also about to become sociological concepts, or have already made the transition, such as social role, social structure, and social movement. It is not known exactly what happens when a metaphor goes from being an expressive term to becoming a scientific concept.[8] Regardless of this issue, it is clear that many sociological concepts are based on metaphors, and therefore also share some of their features.

Fig. 1 about here.[9]

Some sociological metaphors are expressive and suggestive, but not very much worked out. Two examples of this are Weber's iron cage and Tocqueville's habits of the body. In *The Protestant Ethic* Weber uses a metaphor with a limited meaning, at least compared to the one that Talcott Parsons chose for his translation (Weber 1930:181). *Stahlartes Gehäuse* (a shell as hard as steel) became in this way *an iron cage* (e.g. Baehr 2000). In *Democracy of America* Tocqueville mentions habits of the body in his discussion of what factory work does to the body of a worker, but dropped the topic after just a sentence (Tocqueville 2004:649–50).

In order to be truly helpful in an analysis, a scientific metaphor should be more than just expressive. If this is not the case, the metaphor will be of limited value; it may be expressive but little more. A metaphor that has been carefully worked out and generalized to other situations is, in contrast, very helpful. It may also become a concept.

The Heuristic Use of Metaphors in Sociology

There exist a number of benefits to using metaphors in a sociological analysis. They may, for one thing, indicate what kind of facts to look for. When a metaphor does this, it operates a bit like a sensitizing concept (Blumer 1954). Also the latter guides the researcher to some part of empirical reality that is of interest to the sociologist. But there exists an interesting difference between the two. In contrast to a concept, a sociological metaphor typically points the researcher in *several* directions; and the reason for this is that it has several meanings. The metaphor itself has one foot in explicit language, and the other in more or less hidden meanings and associations.

The main benefit of using a sociological metaphor, however is *heuristic*. One important reason for this is that it has several meanings. But it also has the power to set off your imagination. Sartre's term for something that has the capacity to do this is

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[8] According to Charles Sanders Peirce, a concept is characterized by a certain degree of rationality that e.g. the metaphor lacks (e.g. Peirce 1998:273–74, 332). A metaphor is on the other hand more open for creativity (e.g. Anderson 1984). It should also be pointed out that what is discussed in the text about a metaphor becoming a concept should not be confused with what is known in the cognitive science literature as a conceptual metaphor. The latter term, as mentioned earlier, refers to the fact that metaphors are viewed as being part of thought, not just language.

[9] For Fig. 1, see the end of the paper.

Machine	**Organism**	**Ecology**	**System**
mechanism	living unit	assimilation	interdependence
efficiency	function	competition	subsystem
precision	growth	invasion	feedback loop
spring	development	conflict	interaction between parts

Fig. 1 Root Metaphors in Sociology

analogon; and it would seem that the metaphor is an analogon par excellence (Sartre 2004:4–28).

There also exist ways in which one can *increase* the suggestive power of a metaphor. One can, for example, not only explore its explicit meanings but also its implicit meanings. And the same goes for the secondary subject of the metaphor. One can also experiment with the associations that come with the metaphor itself, plus with the secondary subject. Some of these associations are linked to one another in some kind of logical manner, while others operate more at an unconscious level. Taken together, all of this adds up to a huge number of suggestions for the analyst to explore and play around with.

But there is more. It is also possible to increase the heuristic power of the metaphor by working with several metaphors instead of just one (e.g. Rigney 2001). In analyzing marriage, for example, you can view it alternatively as a partnership, a journey through life and a haven from outside life (Lakoff and Johnson 2003:243–44). Or if you are interested in analyzing the ways in which ideas are generated, you may want to work with such metaphors as the marketplace of ideas, the forum of ideas, the arena of ideas, and a population of ideas.

The last example comes from an article by Robert K. Merton which also mentions how each of these four metaphors has been used to produce different and useful hypotheses in the past:

> The metaphor of a "marketplace of ideas" suggested processes of production, distribution, and exchange; under conditions ranging from monopoly to open competition; the "forum of ideas" suggested an image of free discussion subject to processes of persuasion and the exercise of types of authority; the "arena of ideas" conveyed the image of combat to the desperate end, rejecting the possibility, except for rare indulgent moments, of coexistence or complementarity of paradigms; and, to go no further, the metaphor of "a population of ideas" suggests a population genetics model of variation and selection in evolutionary development. (Merton 1975:51)

When the heuristic power of the metaphor is drawn on, it is important to realize that the meanings and hypotheses it inspires cannot be accepted until they have been tested. This is the rule for any hypothesis, but in the case of metaphors the danger of not realizing this increases. One reason for this is that the meanings of a metaphor can

sometimes look as if they are part of the phenomenon itself. They somehow seem self-evident and in no need to be tested.

The heuristic power of the metaphor can also lead to another problem, which is that of too many suggestions. This also means too many suggestions to test. A choice has to be made which ones to work with and which to discard. According to Noam Chomsky, one should pick those that help you best to think:

> Well, metaphors are metaphors. If they're a stimulus to the imagination, fine. Let your imagination be stimulated. But one should not confuse metaphors and imaginative leaps with understanding; they may be a help to understanding, but then we await the understanding to make judgments… Use whatever metaphor happens to help you to think, but don't confuse the metaphor with a conclusion. (Chomsky 1997)

This is reasonable advice, but what if you still have too many promising ideas? One answer would be to engage in what Charles Sanders Peirce calls economy of research, that is, to decide what it will cost you to work with each idea or hypothesis in terms of "money, time and energy" (Peirce 1958:139–61). According to Peirce, you should also keep in mind, that the more scientific knowledge there is on a specific topic, the harder it is to add something new and important. In brief, you should try to select those hypotheses that point in a new direction.

How Metaphors Can Lead you Wrong

So far, what has been discussed is how to work actively with metaphors, in order to come up with useful ideas and new angles during the research process. But a sociologist also has to know how to avoid making errors when dealing with metaphors; and it to this topic we now shall turn. If a metaphor is used in the wrong way, the whole analysis may be endangered.

As mentioned earlier, many metaphors that sociologists use are also part of everyday language. According to Bourdieu, this is something that can easily make the analyst commit serious errors in the analysis. The reason for this is that everyday words are impregnated with folk sociology ("spontaneous sociology"), and therefore represent a threat to the sociological analysis (e.g. Bourdieu et al. 1991:20–24). Sociologists should especially be aware of "the semantic halo" that surrounds everyday words; and as much as possible use terms that are directly grounded in sociological ideas (Bourdieu et al. 1991:22).

Robert Nisbet's in-depth study of the metaphor of development in *Social Change and History* illustrates this kind of error that Bourdieu and his colleagues are referring to (Nisbet 1969). Ever since Antiquity, Nisbet argues, the metaphor of development has been applied to history and knowledge, despite the fact that this is a term that has its origin in the organic world and therefore does not fit these two topics particularly well. Knowledge of very different types have in this way come to be held together and given meaning by associations to nature and plants. Knowledge "grows", there are "stages" in history, and the like.

It is also possible to make serious errors in a scientific analysis by choosing to work with an unsuitable metaphor (e.g. Canguilhem 2008). In sociology this is what happened with structural-functionalism in the United States. With some slight exaggeration one can say that several of the best sociologists in a generation made a number of serious errors because of their strong belief in the metaphor of society as an organism. For students of the role of metaphors in sociology, the case of structural-functionalism represents a major research site.

Some of the errors committed by the structural-functionalists were the following. It was, for example, implicitly assumed that important social actions, just like biological organs, are by nature long-lasting and inherently non-conflictual. Focusing so strongly on the notion of function, also drew attention away from causality. And since the function was often established by first looking at an effect, it was easy to make the logical error of letting the effect precede the cause (e.g. Stinchcombe 1968:80 ff., Giddens 1976, Elster 1990). Many structural-functionalists in the United States were also deeply influenced by Durkheim, who often used the metaphors of society as a body in a questionable manner.[10] Weber's warning that it was "highly dangerous" to use the notion of function, except "for purposes of practical illustration and for provisional orientation", was ignored (Weber 1978:15).

Metaphors can also play a negative role when they are used for anthropomorphic reasons. Evolutionary biologists often speak about animals and plants as if they were people; they "cheat", "compete", are "parasitic", and the like (e.g. Mitchell et al. 1997, Wynne 2012; but also see O'Neill 2005). Ants live in colonies; there are worker bees; and some animals are born slaves. There is less of this in sociology, where however humans are occasionally cast as animals (zoomorphism). Pareto, for example, spoke of foxes and lions, with the former being rulers who dominate primarily through cunning while the latter use force (e.g. Pareto 1966:57–8). Marx referred to the revolution as the Old Mole, and Hegel famously said that the owl of Minerva flies at dusk.

Metaphors are also linked to prejudices in a number of ways. The huge semantic distance that a metaphor draws on makes it, for example, possible to express hatred in novel and extra hurtful ways. So does zoomorphism or viewing people as animals. That a metaphor has many meanings also makes it easy to use it to surround members of another group with suspicion.

Many gender stereotypes are based on prejudices that take the form of metaphors (e.g. Hegstrom and McCarl-Nielsen 2002; Ahrens 2009). That these can also distort a scientific analysis is, for example, clear from the title of the following well-known study: "The Egg and the Sperm: How Science Has Constructed a Romance Based on Stereo-Typical Male-Female Roles" (Martin 1991).

A mention should also be made of what is arguably the most important example of a harmful metaphor invented by a sociologist. This is Herbert Spencer's expression

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[10] The definitive study of Durkheim and metaphors still remains to be written, despite several articles on the topic (e.g. Hirst 1973; Filloux 1979; Hejl 1995; Levine 1995; McKinnon 2001; Sousa Fernandes 2008). Durkheim used metaphors with great skill for expressive reasons, as when he e.g. analyzed the causes of suicide and used expressions such as "the disease of the infinite" and "currents of collective sadness" (Durkheim 1951:287, 365). Much more questionable are his many close parallels between society and an organism. "The body social" can be "sick", and so on (Durkheim 1984: lv). The same goes for his personification of society. A society "thinks, feels, wishes"; it has "collective consciousness" (e.g. Durkheim 1974:26; Durkheim 1968: xlix; Durkheim 1984).

"survival of the fittest" (e.g. Simon 1960; Weingart 1994). This pseudo-scientific metaphor played an important role in the eugenics movement and was also used to justify the brutal type of capitalism that existed in nineteenth century Europe and the United States. The inspiration to the metaphor came from Darwin himself, who adopted Spencer's formulation and in this way unwittingly promoted social Darwinism (e.g. Claeys 2000).

Personification represents another type of metaphorical thinking. At first this may not seem to be the case, since personification does not look like a traditional metaphor. But the basic structure is similar: you have a statement where the primary subject is presented as identical to a secondary subject, in this case a person who can act, think and so on.[11] In everyday language, personification is very common, say, in expressions such as "cancer finally caught up with me" and "inflation is eating up our profits" (Lakoff and Johnson 2003:33–4). In sociology personification typically takes the form of a social phenomenon, or a dimension of one, which is treated as if it were a human being with some of her attributes. According to Andrew Abbott, for example, sociologists often treat variables in this way. "The personification of variables like 'bureaucracy' and 'gender' is customary usage in quantitative sociology" (Abbott 2007:80; see also Abbott 1992:54–62).

While Abbott disapproves of the personification of variables, he accepts it in the case of collectivities and corporate actors. "Treating collectivities as persons is a commonplace of social analysis, as it is of common language and of both Roman and common law" (Abbott 2007:80). In taking this stance, Abbott differs sharply from Max Weber. In a number of places in Weber's work you can find a blistering critique of the idea that there exist collective entities that act or otherwise behave as biological individuals (e.g. Weber 1978:13–18; Weber 2012b:135–37, 280–1, 410; similarly; see also e.g. Mannheim 1953, Gerschenkron 1974, Wendt 2004). In fact, according to Weber, the main reason why he became a sociologist was to put an end to the common tendency in his time to use collective concepts (*Kollektivbegriffe*).[12]

Using this type of concepts not only leads to "woolly thinking", it also makes it hard to formulate sociological problems correctly, according to Weber (2012b:137). The use of personification, he also said, tends to create the illusion that certain social phenomena are much more stable and long-lasting than they actually are. In a statement that sounds nearly ontological, he wrote, "it is a peculiarity not only of language but also of our way of thinking that, in the concepts comprehending action, that action appears in the guise of a persistent being, an objectified structure or one that is '*personified*' and lives its own life" (Weber 2012b:280; emphasis added).

According to Weber, the solution to the problem of using the fiction of a collective actor is to work with the individual (biological) actor as the basic unit in sociological

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[11] In discussions about the nature of the metaphor, the metaphor f is typically given in the following form: "[a noun] is [another noun]", as in "Juliet is the sun". Metaphors, however, also come in several other forms, for example as "[adjective, noun]", as in "social structure" or a "lonely crowd". I have found no discussion of this issue in the literature on metaphors, which possibly signifies that these other ways of using a metaphor should be analyzed in an analogous manner. This would mean that the logic in analyzing these other cases is the same. A lonely crowd would, from this perspective, be analyzed like this: crowd (meaning many people together) = lonely (meaning people not being together). This would again be a case where A = B and A ≠ B.

[12] "If I am a sociologist (according to my employment documents)," Weber wrote in a well-known letter from March 1920, "I am so essentially (*wesentlich deshalb*) in order to put an end to the use of collective concepts, a use which still haunts us" (Weber 2012a:946, Stammer 1971:115 n2).

analysis. But it is also important to realize, he says, that even if collective actors do not exist from the perspective of the sociologist, people often think that they do; and this is something that has to be included in the analysis. Since it can be tedious for the social scientist to always present the analysis in terms individual actions, she may also sometimes use the fiction of a collective actor.

How to Avoid Making Errors when Using Metaphors

But just as there exists a danger of going wrong when you work with a metaphor in a scientificl analysis, there also exist some ways to counter this. According to Gaston Bachelard, for example, one should not use a metaphor at the beginning of an analysis, but first when the scientific problem has been located and you need some inspiration for how to solve it. To illustrate how *not* to go about things, he mentions the example of a scientist who in the 1700s explained the way that an electrical machine works by comparing it to a pump. This was clearly the wrong way to use a metaphor in a scientific analysis, according to Bachelard. More than so, it was the general way in which metaphors were often used *before* modern science had had its breakthrough:

> Modern science does in fact use the analogy of the pump in order to *illustrate* certain characteristics of electrical generators, but this is to try to clarify the *abstract* ideas of difference in potentials and in the intensity of the current. Here we see a striking contrast between the two ways of thinking. The hydraulic analogy comes in *after* the theory in the scientific way of thinking. In pre-scientific thinking, it comes *beforehand.* (Bachelard 2002:88).

Another suggestion for how to avoid making errors when you work with a metaphor is to realize that the reason for using an identity in a metaphor ("Juliet is the sun") is stylistic and has exclusively to do with its expressive capacity. From a logical view-point, in contrast, the metaphor does not express an identity, only that something is *like* something else (Peirce 1987:497). All you can consequently say, as long as you want to be logical, is therefore that Juliet is *like* the sun. The identity that constitutes the heart of a metaphor is from this perspective simply a stylistic tool, used to heighten the expressiveness of what Juliet is to Romeo.

For this reason it is also advisable for sociologists to use the expression that something is *like* something else, say, "society is *like* an organism"; and not to write that "society *is* an organism" (e.g. Walaszewska 2013). Proceeding in this way does not represent a solution to the problems that come with using metaphors, but it does help the writer (as well as the reader) to not be led astray so easily. It is true that using "like" does make the language clumsier and less expressive, but it also transmits a useful warning that the metaphor must not be understood in a literal sense.

It is unlikely that this type of argument would have made Parsons change the title of his most important work, *The Social System*, into *Like A Social System*. But it would have helped this work to survive, if its author had realized that metaphors such as function and equilibrium must not be taken literally. This also leads us back to a suggestion made earlier in this paper of how to avoid making errors when dealing with metaphors. This was to always make sure that one deals with the whole expression that

constitutes the metaphor ("Juliet is the sun") and not just with the secondary subject ("the sun"). More precisely, it is *the suibstiuition meaning* that should be spelled out and used.

In the case of the structural-functionalism this means that its proponents should have translated the metaphors they used for their insights into ordinary language. This is also the message of George Homans in his critique of Parsons in the following passage:

> …if holding a functional theory implies the research maxim "Look for the consequences of institutions, near and remote, good or bad, intended or unintended" and if holding an equilibrium theory implies the maxim "Look for the way institutions work together to promote something like social stability," then these theories are apt to lead to the discovery of true propositions, even though the propositions may eventually to be best explained neither through function nor through equilibrium. (Homans 1964:974).

How to Construct a Sociological Metaphor

Apart from knowing how to handle existing sociological metaphors in such a way that one can draw on their heuristic power, while avoiding their pitfalls, it is also helpful for sociologists to know how to construct a sociological metaphor. This can be done in two ways: either by creating a new one from scratch or by adding to an already existing metaphor, for example by changing its meaning. Only the former will be dealt with here, since changing the meaning of a metaphor comes close to what has already been discussed under the heading of the the heuristic power of the metaphor.

It is very unusual for someone to create a metaphor that can function as the foundation for a paradigm in Kuhn's sense. It is much easier, in comparison, to construct a middle-range metaphor. One way to do so, as mentioned earlier, is to work closely with a root metaphor and see where this leads (see Fig. 1). But there also exist other ways to create middle-range metaphors. Staying very close to some empirical phenomenon is one. To pick a metaphor from some other social science and recast it in sociological terms is another. "The spiral of silence" is an example of the former, and "social capital" of the latter (e.g. Noelle-Neumann 1993; Bourdieu 1984).

The type of scientific metaphor that is perhaps the easiest of all to create is one that is just the name for some phenomenon. In this case, the main purpose of the metaphor is simply to identify some phenomenon and make it more visible. A good metaphor of this type typically singles out what is new about a phenomenon in such a way that you clearly see it. The name should preferably also be easy to remember and grasp. A certain type of organization can, for example, be said to be a hybrid; and a certain type of work, dirty work (e.g. Alexius and Furusten 2019, Hughes 1971:87–97).

When you are looking for a title for a book or an article, a metaphor can come in handy. Successful examples of this are *The Lonely Crowd* and *The Sociological Eye* (Riesman et al. 1950; Hughes 1971). Two examples of well-known articles with metaphors in their titles are "'Banana Time'" and "On Face-Work" (Roy 1958; Goffman 1967). As these titles illustrate, a well formulated metaphor also has a tendency to stay in the mind.

It is clearly helpful to know a number of metaphors when you try to create a new one. This does not only include metaphors in sociology but also in the other social sciences (for metaphors in political science, psychology, economic history and economics, see e.g. Landau 1961, Gerschenkron 1974, Zashin and Chapman 1974. Leary 1990, Mirowski 1994, McCloskey 1995, Mio 1997). It can also be useful to know something about the kind of metaphors that are used in the natural sciences (see e.g. Garfield 1986; Taylor and Dewsbury 2018).

Metaphors, it seems, travel in interesting ways between the various sciences. In the early 1800s, for example, biologists, felt that the idea of society could be used to better understand what an organism is. Sociologists then borrowed the notion of an organism from the biologists, to better understand what a society is (Canguilhem 2000:298–302; see also Figlio 1976).

Since the days of Aristotle it has often been argued that only very gifted individuals can create new metaphors. To some extent this is probably true, but there also exist ways to increase people's natural skill in handling metaphors and inventing new ones. Some of these have already been mentioned. There is also the fact that if you live in an environment in which metaphors and similar stylistic devises are often used, you will be influenced by this. According to Foucault, for example, resemblance and the analogy were central tools of knowledge for scholars during the 1600s (Foucault 1973:17 ff.; see also e.g. Richards 1936:94).

There finally also exist a few simple tricks that can be used to construct a sociological metaphor. One is to just add the word "social" to a suitable noun, as exemplified by such terms as social distance, social control and social construction. One can also add an adjective to "society", and in this way create terms such as mass society, risk society, and so on. The key when you want to create a new metaphor is to be imaginative and a bit speculative, since a metaphor comes from the juxtaposition of two items that do not belong together.[13]

Concluding Remarks: Metaphors as Speculative Instruments

The main message of this paper is twofold. Metaphors can be helpful in the sense that they stimulate the researcher to see things in a new light; it is also possible to increase the ideas one can get from a metaphor. It operates in this way as an *analogon*. A few concrete ways in which this can be done have been suggested.

But metaphors can also lead you wrong; and an attempt has been made to spell out the very mechanism through which this happens, and also to suggest some easy and practical ways to counter this error. The most important of these is to look at *the substitution meaning* of a metaphor. Once its heuristic power has been exploited, you need to translate the metaphor into ordinary prose in order to stave off errors.

It has also been suggested that personification can be problematic when it is used in a sociological analysis. Andrew Abbott has argued that this is the case when certain quantitative methods are used and the variables are treated as if they were actors. And

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[13] According to Gilbert Ryle's definition of a metaphor, "it represents the facts…as if they belonged to one logical type of category (or range of types or categories), when they actually belong to another" (Ryle 1949:16; see also e.g. Turbayne 1962:17–8).

Max Weber has criticized the general tendency by sociologists to view certain collective phenomena as actors. Only individuals can act, according to Weber, even if people believe that also collectives and organizations have this capacity.

There nonetheless remain number of question marks in regard to metaphors. We still know very little about the basic structure of the metaphor, and how its meaning is related to various contexts, be they social or linguistic. It is intriguing, to say the least, that A equals B in a metaphor and at the same time A is different from B. We also know very little about the ways in which individuals use metaphors; and there is clearly room for a sociology of metaphors. There is similarly little knowledge about the different ways in which metaphors are used in the various sciences. What is clear, however, is that metaphors can inspire a richness of ideas and at the same time can lead you wrong. In I.A. Richards' suggestive term, they are truly "speculative instruments" (Richards 1955).

Compliance with Ethical Standards

Appendix 1. Terminology

Metaphor Itself.
The full metaphorical expression, stating an identity between the primary and the secondary subject.
Ex. "Juliet is the sun".
Primary Subject.
The item which is equated with the secondary subject in the metaphor itself, and whose meaning is expanded through the metaphor.
Ex. Juliet in "Juliet is the sun".
Secondary Subject.
The item which is equated with the primary subject in the metaphor itself.
Ex. The sun in "Juliet is the sun".
Residual Meaning.
One of the non-literal meanings of the metaphor itself.
Ex. Juliet lights up the world of Romeo.
Semantic Distance.
The difference between the meaning of the primary subject and the secondary subject. These two are identical in the metaphor itself, but their meanings are widely apart.
Ex. Juliet is a young woman; the sun is a star.
Substitution Meaning.
The metaphor itself has a basic meaning which differs from its literal meaning and is approximative.
Ex. "Juliet is the sun" means approximately that Juliet provides life and warmth to Romeo. Other, similar meanings exist, so-called residual meanings.

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