Abstract

One form of analogical argument proceeds by comparing a disputed case (the target) with an agreed upon case (the source) to try to resolve the dispute. There is a variation on the preceding form of argument that has not been identified. This variation involves multiple sources, and it requires that the sources be combined or blended for the argument to work. Arguments supporting the Triple Contract are shown to possess this structure. Mental space mapping theory will be used to make clear how this sort of argument works. The concept of a partial analogy will be introduced.

Keywords: analogy; argument, conceptual blending; mental space mapping, partial analogy; source blending argument; triple contract.

Introduction

One form of analogical argument proceeds in the following manner. There is a disputed case (the target), and at least one of the parties to the dispute appeals to another case (the source) to try to resolve the dispute. In other words, because the disputed target (T) is similar to the source (S), S and T should be treated in the same way. Call this a single-source analogical argument. Another form of analogical argument takes place when an arguer appeals to more than one source case. Call this a multi-source analogical argument. One way such an argument could work is that each of the sources, on its own, possesses a structure that is relevantly similar to the structure of the target. If

(i) S_1 is similar to T, and S_2 is similar to T, and so on to S_n being similar to T; and

(ii) the S_i are all treated in the same way, then

(iii) T should be treated in the same way as the S_i.

By saying that “S_i are all treated in the same way,” what is meant is that they are all instances of the relevant category; for example, they may all be cases where the defendant was guilty, or all cases where the defendant was innocent, or all cases that were thrown out of court. The argument strategy expressed in (i) through (iii) is one that a lawyer might use when citing multiple precedents. This paper will demonstrate that there is another type of multi-source analogical argument, which, while working from multiple sources, is importantly different from the aforementioned type of multiple-source analogical argument. The difference is in the way the sources are treated. Each source, on its own, is not similar enough to T to argue for a specific treatment of T; rather, the argument works by combining or blending the sources. That is a point which is difficult to grasp in the abstract, but this paper will present an example of such an argument: the triple contract argument in defense of guaranteed return on investment.

Before getting to the triple contract argument, it would be fruitful to review some literature on analogy and mental state mapping theory (or conceptual blending). This work will apply mental space mapping theory to an argument in a legal and ethical context, which has not yet been done. Toward the end of the paper, the notion of a partial analogy will be discussed to help us understand how blended arguments in legal and ethical contexts derive their force.

Structure Mapping and Structure Blending

This section will briefly summarize some literature from cognitive science that is relevant to understanding analogies. For the most part, work in cognitive science has not focused on analogical arguments, as the material discussed in this section will make clear. The preceding notwithstanding, some of this research is useful in helping us to understand analogical argument. The reason is that this research deals with abstractly conceived structures and how they are preserved or blended in the use of analogy. The theory of argument is also concerned with structure. Logical structure is a type of relation that holds between the premise(s) and the conclusion(s). Dedre Gentner and others have made the structure mapping paradigm very influential in understanding analogy, and Gilles Fauconnier and Mark Turner have moved beyond this approach to make use of what they call mental space mapping or conceptual blending. I will argue that Fauconnier and Turner’s work can help us to improve our understanding of the structure of at least one type of argument: source-blended arguments.

Structure Mapping

Let us begin with Dedre Gentner’s seminal, “Structure-Mapping: A Theoretical Framework for Analogy.” In this work, Gentner argues that not all similarity comparisons are analogies. Similarity comparisons involve a source or base domain and a target domain. Domains consist of objects, attributes, and relations. The key to separating out analogies from other types of similarity comparisons is to stress the importance of mapping relations. For example, key in the analogy, “The atom is like our solar system”, is that the relation REVOLVES (x, y) is mapped from the source – our solar system – to the target. Electrons revolving around an atom are said to be like planets revolving around the sun. Other relations could be mapped as well (Gentner 1983, 159). However, attributes (or single place predicates) of objects are not mapped. For example, we do not map the yellowness of the sun to the nucleus of the atom. According to the structure mapping approach, analogies will involve many relational mappings, but few if any attribute mappings. This is different
from a literal similarity comparison which would involve many relational and attribute mappings. For example, consider someone who says of a solar system in another galaxy that, “The K5 solar system is like our solar system.” Here it is not just that relations are mapped, but attributes as well: YELLOW and MEDIUM are mapped from our sun to the K5 sun. As it turns out, Gentner identifies other types of similarity comparisons besides literal similarity and analogy, but we need not get into that here. (See Gentner 1983, 157-161 for details.) This work has influenced a number of different theorists who have gone on to stress the importance of structure mapping (or the importance of preserving relational mappings) in trying to understand analogy (Eliasmith & Thagard 2001; Falkenhainer, Forbus, & Gentner 1989; Holyoak & Thagard 1989; Holyoak & Thagard 1995; Hummel, Burns, & Holyoak 1994; Holyoak & Hummel 2001).

**Blending**

Gilles Fauconnier and Mark Turner have argued that structure mapping will not account for all the linguistic phenomena that come under the heading of “analogy” or “metaphor.” Their approach to these phenomena is part of a more general framework they refer to as mental space mapping or conceptual blending. Let us have a look.

Consider a monk who, at the dawn of one day, begins walking to the top of a mountain, which he reaches at sunset of that same day. He then spends several days at the top of the mountain meditating. One day, at dawn, he begins his descent of the mountain using the same path as when he ascended (but in reverse). He arrives at the base of the mountain at sunset of the day he started his descent. Without being given any information about the speed at which the monk is traveling during ascent or descent, can it be determined whether there is one point on the path that the monk occupied at the same time of day during both the ascending day and the descending day? The question is not whether we can determine exactly what the time is or where the location on the path is. Rather, it is a question about whether there is some location on the path, wherever that location happens to be, that the monk occupied at the same time, whenever that time was, both on the ascending and descending days. Stop reading and think about it for a bit.

Here is how many people solve the problem. They combine or blend the monk ascending the mountain with the monk descending the mountain, and once they carry out the blend, they realize that there must be some point at which the monk would “pass himself” on the two different days of the journey. The idea of the monk “passing himself” on the ascending and descending days is the result of blending the monk ascending the mountain with the monk descending the mountain. Of course, there is only one monk, and he cannot literally pass himself, but thinking of the problem in those terms allows many to discover the correct solution to the problem: yes, there is some point on the path that is occupied by the monk both during the ascending and descending phases of his journey.

**The Triple Contract**

**Introduction**

Inspired by biblical texts, the early Christian church had strict prohibitions against charging interest. The prohibition against the charging of interest was challenged using a variety of arguments. The debate over how best to understand the charging of interest and its moral and legal status raged for centuries, and others have documented that debate (Nelson 1969; Noonan 1957). I will examine one of the arguments in this debate: the argument involving the triple contract.
History of the Triple Contract

The triple contract (also known as the “German contract” and the “5 percent contract”) combined different forms of generally accepted financial interaction. The first form of accepted financial interaction was the societas – a contract of partnership where the partners pooled their resources (both capital and intellectual) to realize a profit. This was considered different from usury since risk was shared, and since neither partner was understood as giving up ownership of any of their resources. If (a) one partner provided money or other capital resources while (b) the other partner brought skill, knowledge, and labour to the arrangement, and (c) any resulting profit from the partnership was shared, then it was said that the profit was not being realized merely in virtue of a loan. Partnership was considered something different from a loan precisely in virtue of the pooling of resources and the sharing of risk and potential benefits and harms.

A second form of financial interaction that had emerged by the 14th and 15th centuries was the insurance contract. Again, this was considered different from usury since there was an exchange of risk. The insuring party was considered entitled to profit (via insurance premiums) in virtue of assuming risk.

The triple contract involved two parties signing three contracts. The first contract was a contract for partnership, a societas. For example, a well off widow investor may provide money to a maritime merchant for some prospectively profitable venture. The second contract was a contract for insurance. The same merchant agrees to insure the same investor against loss of the principal; in exchange for this guarantee on the principal, the investor agrees to accept a lower percentage of the profit than would otherwise come her way. (For example, if the venture in question usually results in a 14 percent return, then the chance at that return is sold for a guarantee on the principal and, say, a return capped at 8 percent. If the venture goes poorly, there may be no return at all.) A third contract was then signed, where the same investor sold this uncertain future gain for a guaranteed but lower rate. The investor is now insured not only against loss of principal but also against the possibility of obtaining no return. (Following the example through, the potential for an 8 percent return is sold for a guaranteed return, say, of 5 percent.) Using the triple contract, investors could realize a guaranteed return on investment. Problem: guaranteed return on investment was thought by many to be usury. Many commentators agreed that if the insuring party was a third party, then the triple contract would not be suspect; what caught the attention of moralists, theologians, and jurists is that when the same two parties are involved in all three contracts, risk is eliminated for one of the parties. The counter to this type of concern was that risk was not a necessary condition for the legitimacy of any of the contracts. Clearly, those who supported the triple contract were trying to overturn some of the traditional ethical and legal strictures placed on guaranteed return on investment. Let us have a closer look at how the blending of cases contributed to their case.

The Triple Contract as Source-Blended Argument

The first of the three contracts making up the triple contract is the contract of partnership. In general, when this contract is signed between an investor and a merchant, the relations listed in the S1 oblong of figure 2 hold true. I am assuming that no other contracts are signed and that no other relevant agreements or considerations are at issue; this is what is meant by such relations holding “in general.” The relations listed in the S1 oblong do not constitute an exhaustive account of the relations that hold between the investor and merchant, but they are the relations that were widely taken to be relevant in matters of commerce.

The S2 oblong of figure 2 lists relations that generally hold as a result of signing the second contract. It is assumed that the parties signing this second contract are not identical to the parties signing the first contract. Also, it is assumed (again) that no other contracts or agreements are at issue. This is what it is for the relations enumerated in S2 to hold in general. What we need to do now is capture the signing of both contracts. Since the same parties signed both contracts, one of the parties – the investor/insured party – no longer runs the risk of losing her initial resources. However, there is still some shared risk. Both parties run the risk of realizing no return at all from commitment of their initial resources. The B1 oblong of figure 2 captures the relations that hold as a result of the same parties signing both contracts. B1 is the first blend in our story. Figure 2 captures the blend of relations created by the same parties signing two different contracts.
The third of the three contracts was another insurance contract. If we assume that the parties signing the third contract are not identical to the parties signing the first contract, then the relations outlined in oblong S3 of figure 3 hold true. The relations in S3 are identical to the relations in S2. When all three contracts are signed by the same two parties, we get the state of affairs presented in oblong B2 of figure 3. To get the second blend, we start with the first blend (B1) and blend it with S3, as depicted in figure 3. By signing all three contracts, risk is completely eliminated for the investor.

One paradigm of usury was the subsistence loan in contexts of distress, where the receiver of the loan agreed to interest charges out of desperation and was unlikely to be able to repay the loan with interest. Such a loan could lead to a state of perpetual indebtedness. Triple contract investments did not, in general, have such a form at all. Both parties were likely to benefit, and defenders of the contract pointed this out. However, that was not enough. Defenders of guaranteed return on investment realized that what they advocated was likely to be seen as a form of usury, and they showed how to conceive of some instances of guaranteed return on investment as a multiply insured partnership. The form of guaranteed return being advocated was *partially analogous* to a contract of partnership if signed all on its own. Such a contract involved a pooling of resources, which is present in the merchant-investor guaranteed return scenario. However, the partnership contract did not include provision for guaranteed return. Insurance contracts, if signed on their own, could completely insulate one party from risk, and that is *partially analogous* to the merchant-investor guaranteed return scenario, but insurance contracts were not understood as possessing the relation of partnership. It is only when all three contracts are signed that a partnership with one party free of risk is created. In other words, the *combination* or *blending* of the source cases yields the intended result.

More needs to be said to make perspicuous the sense in which analogy plays a role. Why not simply say that there is a blending of source cases to argue for a specific state of affairs and leave it at that? Well, putting things in that way misses the manner in which the argument derives its force. The final target, B2, is the merchant-investor guaranteed return scenario, and the sources – S1, S2, and S3 – are the three scenarios created, in general, by the respective contracts that are used in the triple contract. There is a relevant relation that S1 shares with B2 – the pooling of resources. However, there is also a relevant relation that S1 does not share with T – the absence of risk for one of the parties. (Moreover, the absence of risk for one party is a feature that is common, though not exclusive, to cases of usury.) The mapping of relations from source to target is a hallmark of analogies. It is in virtue of the mapping of a relevant relation from S1 to B2 that S1 is a *partial* analogue of B2. The reason that it is *partial* is that any mapping of relations that may hold between S1 and B2 is insufficient for establishing the acceptability of a specific treatment of B2. The same can be said for the other sources. Each of the S_i is a partial analogue of B2; individually, they are insufficient for making an acceptable case for a specific treatment or classification of B2. Jointly, the S_i do establish a case for the acceptability of a specific treatment of B2. Of course, objections could be raised. There is no reason to believe that it will always be the case that individually acceptable contracts are jointly acceptable. And there was no shortage of objectors to the triple contract. That said, it is not my purpose here to deliver an account of all the objections and replies pertaining to the triple contract. It is my purpose to begin to make clear how source blending analogical argument differs in structure from other types of analogical argument. Each type of contract in the triple contract, on its

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**Figure 3:** blending the first blend (B1) with a second insurance contract
own, expressed the conditions for a paradigmatically acceptable form of financial interaction. To understand how source-blended arguments work, we need to see not only that there is a blend, but we also need to see what there is a blend of. If, after a blending of sources, one or more of the sources no longer resembled the target in any relevant respect, it is difficult to believe the argument would have any force. It matters that some relevant relation(s) can still be mapped from each source to the target; it matters that the blend preserves a partial analogy from each source to the target. The reason is that the treatment of the target derives the acceptability it has from the acceptability of the sources. If the blend of sources eliminates all of the relevant similarities between one or more sources and the target, then it is hard to see how the acceptability of those sources could be transferred to the target through the blend.

**Objections and Qualifications**

At this point, it might be objected that since analogies in general do not involve a complete mapping of elements from the source to the target, perhaps it is best to dispense with the notion of a partial analogy and simply construe the triple contract argument as involving three arguments from analogy. In other words, it might be thought that we can dispense with (a) the idea of the analogies being partial and (b) the idea of blending sources. But we cannot. The reason is straightforward: for purposes of argument, the analogy from S1 to B2 is very weak. It could not, without blending, be used to mount a good argument for the acceptability of guaranteed return on investment. The Ss are partial analogues of B2 in virtue of each S, contributing to (or being part of) a good argument for a specific treatment of B2. The preceding helps us to grasp the sense in which the analogies holding between source and target are partial.

Let us consider another objection. Perhaps what is really doing the persuasive work is not the blend of sources but the comparison of the blend with the paradigm cases of usury. As explained in the previous section, paradigm cases of usury involved subsistence loans. The triple contract could be distinguished from such scenarios (since the guaranteed societas often led to benefits for all), and perhaps that is all that was going on. Any plausible reply to the preceding should not deny the role of distinguishing cases. It is central to reasoning by cases in ethics and law. To be sure, this paper contains a simplified account of the arguments surrounding the triple contract. Distinguishing it from paradigm cases of usury did play an important role (as did other arguments discussed in Nelson 1969 and Noonan 1957). That said, the very fact that people had to go to the trouble of drawing up and signing three separate contracts (as opposed to one that directly allowed for guaranteed return on investment) is powerful evidence that a blending of individually permissible forms of financial interaction played an important role in supporting guaranteed return on investment. It was not enough to distinguish some guaranteed investments from paradigm cases of usury; guaranteed return had to be likened to prototypically acceptable forms of financial interaction. (Why else go to all the trouble of drawing up three contracts?) Since there was not a single form of acceptable financial interaction that guaranteed return could be convincingly likened to, the comparison had to be to a combination of acceptable forms. That is why three contracts were originally required.

The previous paragraph mentioned prototypes, and a few remarks on this subject are appropriate. Could prototype theory be used in place of mental space mapping to explain the triple contract argument? Prototype theory and mental space mapping cover related ground, but at this stage in their developments, it is not clear that one could supplant the other (though they may well supplement one another). Prototype theory is effective at dealing with graded concepts (Rosch 1983). For example, a sofa is more prototypically a piece of furniture than a stool. It can also deal with combinations of concepts in interesting ways. The word “large” suggests something different in large furniture than it does in large insect. Sofa might come to mind immediately for the former, and grasshopper for the latter, but they are quite different in size. The category of acceptable financial interaction (in the relevant place and time) may have included prototypes like societas and insurance contract. However, it is unclear that prototype theory is sufficient for explaining why a multiply insured societas would be considered acceptable. It is unclear, what, if anything, acceptable multiply insured societas would have called to mind to 14th century individuals with no prior exposure to the triple contract. (Though I am sure large furniture would have called to mind prototypical instances.) They may have puzzled over how or why a societas would be insured. Such an arrangement could involve two parties (as it generally did with the triple contract) or it could involve three parties if the insuring party was different from the investor and the merchant. Mental space mapping provides specific tools for one-one and many-one mappings that allow us to understand how guaranteed return could be conceived as a multiply insured partnership (or as a combination or blend of prototypically acceptable interactions). However, that combination or blend was too new and controversial to be understood as a prototypical instance of societas or insurance. Nor would a family resemblance of the blend with insurance (singly) or societas (singly) be enough for the acceptability of the blend. The mapping of salient relations from different prototypical forms of acceptable financial interactions to a blended result was what allowed defenders of the triple contract to argue for its acceptability.

**Summary**

The simplest form of analogical argument is when one source is compared to one target. In that case, there can be no blending of sources, and the single-source is used to argue for a specific treatment of the target. In some contexts, multiple sources will be cited, but each of the sources, on its own, is treated as analogous to the target. In other words, each of the sources, on its own, has sufficiently many relations or features that can be mapped to the target to provide an acceptable case for a specific treatment of the target. In the source-blended argument, the sources are singly inadequate.
but jointly adequate for licensing a specific treatment of the target. For this reason, the source-blended argument cannot be reduced to a sequence of single-source arguments. There are multi-source analogical arguments that can be understood as a sequence of single-source arguments each of which constitute an acceptable case in favor of the same conclusion; it has been the burden of this paper to show that source-blended arguments are not best understood in that way.

**Other Questions**

What makes two or more “things” analogous? Two or more things can be very similar yet not be analogous. The literature on analogy stresses the importance of commonality of relations and not just monadic predicates in understanding what makes things analogous. This paper suggests that two or more things can be *partially* analogous. The question naturally arises: what makes two or more things partially analogous? Again, many things can be similar but not partially analogous; more work needs to be done to spell out when cases are partially analogous. More work also needs to be done on understanding the manner in which analogical arguments can be evaluated. While this paper does not contain extensive commentary on the evaluation of analogical arguments, one thing should be clear: if our evaluations of multi-source analogical arguments are going to be plausible, we need to distinguish between source-blended and non-blended arguments. These arguments can fail or succeed in different ways. For example, in a non-blended multi-source argument (which is a sequence of single-source arguments), if it turns out that one source is problematic and must be abandoned, the conclusion of the argument may still be intact since the other single-source arguments making up the multi-source argument may be intact. With a source-blended argument, if it turns out that one of the sources has to be abandoned, then the support for the conclusion has been seriously undermined. (Think of what would happen in the triple contract argument if it turned out that insurance contracts were not generally acceptable.) There are other differences between the manner in which different types of multi-source arguments may be evaluated, and more needs to be said on this issue as well. However, before engaging these and other questions we must first recognize that there are importantly different types of multi-source arguments. This paper has been a first step toward making that point.

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**References**


