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# Making sense of a blend

## A cognitive-semiotic approach to metaphor

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In this paper we propose an analysis of the metaphor “This surgeon is a butcher!” discussed in Grady, Oakley & Coulson (1999), introducing it into a mental space framework derived from conceptual metaphor theory (CMT), blending theory (BT) and cognitive semiotics. The method of analysis is to work backwards; we attempt to reconstruct the meaning of the butcher-surgeon metaphor by giving a step-by-step description of the cognition involved in understanding an occurrence of the metaphoric expression, and hypothesize a general framework for analyzing metaphoric blends and other kinds of rhetorically potent integrations of semiotically distinguishable conceptual contents (*mental spaces*) in expressive blends. It is argued that examples of expressive blends, such as metaphor, need to be accounted for in semiotic terms, since they occur in — intersubjective as well as private — communication, which is essentially semiotic in nature; expressive blends occur as *signs* and are therefore a natural subject of cognitive semiotics, the study of cognition in semiosis.

**Keywords:** blending, cognitive semiotics, conceptual integration, mental space, metaphor, reference, relevance, enunciation

### 1. Introduction

In Grady et al. (1999), it is suggested we view Conceptual Metaphor Theory (CMT) and Blending Theory (BT) as ‘complementary’ in their respective understandings of metaphor. BT translates source and target domains into input spaces — a ‘space’ or ‘mental space’ being:

“... a partial and temporary representational structure which speakers construct when thinking or talking about a perceived, imagined, past, present, or future situation. Mental spaces (or, ‘spaces’, for short) are not equivalent to domains, but, rather, they depend on them: spaces represent particular scenarios which are structured by given domains. For instance, a BT account of example 1 [“The committee

has kept me in the *dark* about this matter.”] would involve a space in which the agent is standing in the dark. While this representation appeals to our knowledge of visual experience, the recruited structure is only a small subset of knowledge of that domain. In short, a mental space is a short-term construct informed by the more general and more stable knowledge structures associated with a particular domain.”<sup>1</sup>

The core claim in CMT, that metaphorical meaning occurs in conceptual predication (some A is conceptualized in terms of some B) when source and target domains are different, is discreetly dismissed and replaced by the hypothesis that there is an internal process in a network of mental spaces that produces a ‘fusion’ or ‘blend’ of elements and thereby suppresses structure in one of the inputs, the target material, which yields to structure from the other input, the source material; this hypothetical process is termed ‘accommodation’:

“... part of what defines metaphors is that they involve (temporary) suppression of critical knowledge of a given conceptual domain, and therefore are not compatible with our understanding of reality. We refer to this particular phenomenon, in which structure from one fused element is blocked, as ‘accommodation’: the target material yields to the source material, which is explicitly represented in the blend.”

It is unclear whether the ‘structure’ or ‘material’ referred to here is encyclopedic or category-formed (prototypical), or if it is conceptual or semantic in some other sense. The content of a mental space is simply determined as a mental representation, so in this conception some unspecified material from one representation suppresses some material in another representation, and the suppressed material is critical to the representation it is part of. We do not know why this suppression should happen. It is not clear what it is that makes one representational input into the target of the metaphor, apart from its losing structure — and why the target material, if it is ‘critical knowledge’ of the target, would ‘yield’ to the alien structure. This lack of clarity may stem from the fact that the predicative format that defines CMT is not upheld in BT. The latter sees all blends in terms of a melting pot whose vaguely determined inputs merge into new compositions determined by certain principles of optimality; in that view, metaphors do not differ significantly from other forms of blending.

The metaphor we wish to subject to analysis, “This surgeon is a butcher”,<sup>2</sup> is discussed in Grady et al. (1999) as the authors’ first example of the BT take on metaphor (op. cit. Section 2.3). The formula involving two *domains* (in CMT) is translated into a new form involving four *spaces* (in BT), namely two input spaces, a generic space and a blend. There is a surgeon’s input space and a butcher’s input space, a generic space containing the idea of an abstract agent using means in general to achieve a goal in general. And there is a blend of surgeon and butcher in which the blended agent has a surgeon’s goal and uses a butcher’s means. The

surgeon-butcher metaphor is characterized as “well-worn” and considered to be “intended as a damning statement about an incompetent practitioner (Veale, 1996).” We argue in the present article that ‘incompetence’ is not what the metaphor means to predicate about the practitioner.

In Grady et al. (1999), the intended meaning described as ‘incompetence’ is thus derived from a simple cross-over of ‘goal’ and ‘means’ of butchers and surgeons, respectively: using a butcher’s means (“butchery”) for a surgeon’s goal (“healing”) and not for a butcher’s goal (“severing flesh”). Notice that this analysis fails to show why the agents’ cross-over does not have a *surgeon’s* means and a *butcher’s* goal.<sup>3</sup> The mismatch of means and goal is presented as the reason why the metaphor should be taken to refer to a display of inadequate behavior. In our analysis, we propose, instead, that he is being blamed for *being ethically irresponsible*. Our analysis implies an additional input: an *ethical schema*, in order to achieve the relevant framing which grounds the normative evaluation.

CMT’s directional view of the relation between source and target — the projection goes from source to target — is replaced by a non-directional view in BT, where the projection goes from any of a number of inputs, minimally two, to the blend. We intend to explain that there is in fact a directional mapping from source space structure to target space structure. This mapping connects a source structure as a generic predicate to a non-generic subject, namely the target structure that the metaphor refers to. As in BT, there is a blended space that imports structure from both spaces. A production of new meaning takes place when the blend attracts autonomous schematic structure, such as the ethical schema (of right and wrong) we will see in this example; this supplementary input triggers the semantic completion that makes the metaphor meaningful to its users. Our network therefore includes a mental space containing a scenario in which the metaphor is expressed by someone in a specific situation. This is a semiotic<sup>4</sup> contribution to the semantics of metaphor and is, to our knowledge, the first attempt at giving a semiotic account of metaphor, by integrating central ideas from both CMT and BT.<sup>5</sup> In the present text, we hope to improve cognitive metaphor analysis by critically reanalyzing the example in question and revising the architecture of the blending network, so as to include its anchoring in communication and the meaning that metaphor produces in communication.

## 2. An example

The question we are asking here is what the utterance “This surgeon is a butcher” means. It is a metaphoric expression which is evidently not an instantiation of an entrenched conceptual metaphor (in the Lakoffian sense) such as SURGEONS ARE BUTCHERS (cf. Lakoff & Johnson, 1980); the domains of surgery and butchery are brought in *ad hoc*. The answer to the question of what the metaphor means,

in any event, lies not in expounding any underlying concepts, as is done in the practical application of CMT, but rather in exposing the conceptual process of interpretation. What the metaphor means is what it is intended to mean in a particular situation where it is uttered by someone; our claim here is that it does not have intrinsic meaning outside of its actual use.<sup>6</sup> The utterer, the “sense maker”, intends to share some content of thought with an addressee in a semiotic exchange. This semantic content, which is inherently intersubjective, borne of the speaker’s intention to have the addressee recognize his utterance as an attempt to engage in a semiotic event of shared attention, as well as its pragmatic implications (its status as a communicative act), constitute the meaning of the metaphor. It is, in effect, inconsequential for the analysis whether it is conducted from the perspective of the speaker or the addressee, as the mental content is shared (only in miscommunication would that not be the case).

The pragmatic effect of the utterance “This surgeon is a butcher” is undeniably some sort of reproach: the surgeon is being criticized. In Grady et al.’s (1999) analysis, for instance, and as mentioned, the surgeon is said to be criticized for being incompetent. In Glucksberg (1998, p. 42), the surgeon “is a member of the category of people who botch jobs in reprehensible and often appalling ways”. To our knowledge, no account of the meaning of the butcher-surgeon metaphor omits the interpretation of it as a *criticism*. This point may also serve as a comment to CMT, since it illustrates that the metaphoric relation between the source and the target cannot be one of simple projection from one to the other so that the target is understood “in terms of” the source, as CMT would have it. If this were the case, why would the metaphor be understood as a criticism? Nothing in the experiential domain of butchers warrants a negative evaluation, so it is hard to see how the critical pragmatic implication could in fact be derived from the source domain.<sup>7</sup>

This evaluation is part of the meaning of the metaphor, and as such it is part of its *semantics*. The evaluation is a crucial part of the semantics of the utterance, and its social implication is that of reproach; the reproach, then, is a pragmatic effect of the evaluative metaphor.

We argue that the surgeon is criticized for having acted in an *ethically* indefensible manner. However, setting the issue of the specific content of the criticism aside, the fact remains that it is a part of the meaning of the utterance; one has not understood the semantics of the utterance if one does not conceive of it as expressing a criticism. Yet it lies beyond the strictly linguistic content of the utterance, if by strictly linguistic we mean the predication evoked by the lexical, morphological and syntactic elements of the sentence. This is the *psychological* dimension of understanding the semantic content of the metaphor: knowledge and application of the norms by which we judge one another. It is not possible to understand the meaning of this metaphor without applying a *normative* schema of some sort. The evaluation does not follow from the predicative semio-syntax<sup>8</sup> of the utterance. That is, one will not arrive at a criticism by accounting for the meaning of the word

*this*, the meaning of the word *surgeon*, of the phrase *this surgeon* etc, nor by accounting for the specific ways in which the surgeon is *a butcher*. The metaphor has a descriptive as well as a *deontic*<sup>9</sup> dimension.

The criticism functions as a reproach; thus the metaphor also has a *social* dimension. The reproach is an essential — pragmatic — effect of the metaphor. It is part of what the metaphor is taken to mean, and hence part of its meaning. It is worth noting, in this context, then, that knowledge of psychological and other ‘lifeworld’ phenomena as well as social norms (for communication-related behavior) are relevant for understanding, and analyzing, metaphor, at least in cases where metaphor is used to express an evaluation of the topic (target).

Before we introduce the example to be analyzed, we would like to explicate two methodological considerations. Firstly, we find it advisable to avoid self-made data; when using self-made data one’s conclusions rely on the reader’s acceptance of the examples as ‘plausible’, whereas examples of actually occurring communication call for no such act of faith.<sup>10</sup> Secondly, such empirical examples yield a meaning which the analysis can take as its starting point, in answering the question of how this (situationally manifested) meaning is cognized. A satisfactory analysis, then, is an analysis that accurately accounts for the cognition involved in understanding the expression as meaningful in this particular way.

Adhering to the second point, we will introduce a diagram of six interrelated semiotically precategorized mental spaces forming a figurative and dynamic semantic network that is designed to derive the critical meaning of the utterance. It is supposed to represent a slowed-down account of the cognition involved in understanding the utterance.

As to the first point, it is a fortunate coincidence that the above mentioned utterance was on one occasion produced in the presence of one of the present authors: The speaker was a woman who had just undergone surgery and was recovering in the hospital. The post-surgery patient was not happy with the scar which had a more dramatic appearance than she had expected. She showed the scar to her visitor and told him she had not been warned it would look like this. Emphasizing her dismay she said “This surgeon is a butcher!”. The addressee took this utterance to mean that she felt the surgeon should have been more careful with the stitches, since she would now have to live the rest of her life with a noticeable scar, visible to anyone who saw her in the nude. Since the addressee was in the habit of enjoying this privilege, he inferred that she wanted him to reassure her his viewing pleasure would not be diminished and proceeded to comfort her by expressing his affection.

The latter inference can be subsumed as the (pragmatic) speech act of soliciting reassurance. The ‘interpretation’ of the utterance as a *speech act* relies, of course, on a primary understanding of the utterance as an evaluative predication (though we do not claim that the ‘primary’ understanding — of the pragma-semantics of the utterance — precedes the other in processing time).

The meaning of a metaphor, such as the one given in this example, is five-fold: 1. sentence apprehension; 2. metaphoric space-building; 3. a structured blend; 4. emergent meaning; 5. implications for the situation of communication. The addressee, having understood the utterance, has grasped (1) that “a butcher” is predicated of “this surgeon”. Comprehension, at this level, requires familiarity with the words and syntax employed in the sentence. (2) that the predication is metaphoric (either with respect to his personal identity or with respect to his professional identity<sup>11</sup>). (3) in what specific sense this surgeon is a butcher. (4) the evaluation that follows from (emerges in) this blend. This is the meaning of the blend. (5) what pragmatic implications arise, given the emergent meaning in the blend and the circumstances characterizing the communication taking place.

The implication here is not that any addressee must necessarily first go through step 1 to get to step 2, and so on, in processing the meaning of the utterance; these two can perfectly well be apprehended simultaneously; but that it is possible for an addressee to get the 1st meaning and not the 2nd, and to get meanings 1 and 2 but not 3, and so forth. Patients with schizophrenic disorders, to take an illustrative example, typically have a hard time getting from 1 to 2 and thus will not get 3. In other words, they typically create only one space (subject and predicate) and not a blend with two inputs (each with subject-predicate structure) (see e.g. Bonis et al., 1997; Langdon & Coltheart, 2004).

Having noted the above distinctions, the interesting question is how this happens. What cognitive process do we go through in order to arrive at such a (multi-leveled) understanding? Or, asked differently, what is a likely process to be occurring in the mind of a speaker who utters a metaphor, and *means* something by it?

What “This surgeon is a butcher” meant, when it was uttered, was what the utterer of the sentence intended for the addressee to understand by it. Since meaning can be shared, what is captured in the analysis is this shared meaning, shared by the speaker, the addressee, and by whoever has read the description of the communication taking place and understood it.<sup>12</sup>

Our post-surgery patient intends to predicate something of the surgeon who performed the surgery and creates a metaphor. This metaphor is intended to express an evaluation of the surgeon. The rhetorical power of the blend lies in expressing this evaluation emphatically, through conceptual dramatization. And ultimately, the intention behind criticizing the surgeon is to make the addressee infer what to think, do or say next. Within the realm of appropriate responses was the addressee’s actual response which was to offer her reassurance the scar did not influence her beauty in any significant way. Had he, instead, commented on the low wages of hospital workers, that might conceivably have angered her. By responding appropriately the addressee shows that he has understood — not only 1, 2, 3 and 4, but also 5; he has made a correct pragmatic inference. The generalization here is that a metaphor only has manipulative force in so far as it means something; in so far as the emergent evaluation (4) and the pragmatic implications



(5) are grasped. What inferences arise depends largely on the addressee's affective response to the hyperbolic imagery in the metaphoric blend and the evaluation of the referent which ensues.

Note that we know that the expression is metaphorical, essentially because we know it is about the surgeon *in relation to the scarred patient*. The situation provides the proper context for framing the surgeon as an agent acting upon a patient, at the expense of all other possible ways of conceiving of the surgeon. It is clear, then, from the context, that the purpose of the metaphor is not to *categorize* the surgeon but rather to evaluate him. The evaluation is made especially potent by the figuratively vested imagery afforded by the metaphoric juxta- or rather superposition (when the surgeon is imagined as a butcher), and by the hyperbolic predication that results from grasping the force-dynamics<sup>13</sup> involved in the metaphorical scenario.

Metaphors with animated imagery — where both the force-dynamic and the figurative aspects of the metaphorical scenario are strongly experienced — are potentially very effective rhetorically because their “juicy” imagery gives extra weight to the implicit *evaluation* expressed; the animated hyperbolic predication involved in such “juicy metaphors” generally yield a stronger emotional reaction than literal predication does.<sup>14</sup>

We immediately know it is correct to interpret “This surgeon is a butcher!” as an *evaluation* of something. It is taken to be a critical remark *on a scar*, not mentioned in the expression itself but made salient in the situation of communication, where it is the focus of shared attention. The scar motivates the negative evaluation of the surgeon. The speaker's (ostensive or verbal) gesturing to a scar makes it clear to the addressee that it is not the speaker's intention to recategorize the surgeon or to bring attention to a hobby of his. The blending by which two categorial determinations merge into one item is metaphorical only if it does not simply express that the item in question should be recategorized (“this (so-called) surgeon is in fact not a surgeon, but a butcher”) or that it is to be categorized in both ways (“this surgeon has two professions; he is also a butcher”). The attentional focus on the scar makes it clear that the sentence refers to the causal agent of a surgical operation on the speaker's body. This framing of the surgeon (the target of the metaphor) in turn affects the framing of the butcher (the source).

On this view, the relevant aspect(s) of the target determines how the source is construed. By contrast, Glucksberg & Keysar (1990) argue that metaphors are understood as class-inclusion statements. They describe metaphoric predication as a matter of including the target in a category of which the source is a prototypical example, or, alternatively, the source entity has a fixed metaphoric meaning stored in the lexicon, which is then simply ascribed to the target.

“The categorical statement

26. My surgeon was a butcher



assigns *my surgeon* to the class of people who are incompetent and who grossly botch their job.” (Glucksberg & Keysar, 1990, p. 9)

On this account, it is possible to predict the meaning from the form “*a* is a butcher”; it means *a* is someone who is “grossly incompetent in tasks that require finesse, skill and expertise” because that is what “butcher” means, according to a dictionary entry for “butcher”. There is thus no blend to be analyzed; as in CMT, the predicate is merely transferred from the source to the target.

Glucksberg & Keysar would not claim, of course, that the category of butchers is a category of “grossly incompetent” people. That is, a ‘butcher’ cannot be said to be a prototypical instance of the set of workmen who are incompetent and grossly botch their jobs.<sup>15</sup> Instead, the predicate is thought to be the result of a logical operation, given the predetermined lexical meaning of “butcher”. The predicate ascribed to the surgeon comes from one of the Webster dictionary entries for the word “butcher”: “an unskillful or careless workman” (1990, p. 9).

There are several problems with this analysis. Firstly, “My surgeon was a butcher” can only be described as a “categorical statement” in so far as one ignores what the metaphor is about. If we assume that Glucksberg & Keysar had a situation in mind similar to the one described here, with a post-surgery patient complaining about the surgeon who has performed the surgery, the intended inference is about this particular surgeon, and there is no reason why the superordinate *ad hoc* category “the set of workmen who are incompetent and grossly botch their jobs” should be constructed. The intention behind the metaphor is hardly to categorize the surgeon as belonging to a “set”. The methodological question here would be: why construct a category (in the analysis) that is not warranted by any relevant circumstances (in the situation where the metaphor is produced)?

Secondly, the Glucksberg & Keysar account of metaphor skirts the issue of how “is a butcher” becomes a negative predicate of *a*, the target entity. Referring to a conventional lexical meaning of “butcher” camouflages the omission of an actual analysis. If “butcher” really has this conventional metaphorical meaning, HOW did this metaphorical meaning come into existence?

Thirdly, though it may be a valid generalization that this metaphoric predicate always carries negative meaning (negative in the evaluative sense), this prediction does not also warrant the expectation that the predicted properties are unvaried. Does the butcher predicate always render the subject as unskillful or careless? A random Google search of the phrase “is a butcher” suggests otherwise. Let us consider the first two results of this search.

The first result is a news article about Israeli military attacks on Palestinian civilians. The metaphor is produced by a woman whose home has been destroyed by Israeli forces:

“They destroyed our house without warning. We left without our shoes,” she cries. “Sharon is a butcher.” (‘Sharon is a butcher’ posted 10/16/2004: [www.news24.com](http://www.news24.com))

The second search result is a blog entry entitled ‘God is a butcher’:

“God is a butcher and we are all going to be slaughtered, I work for him now. I do not hate him; I just don’t like his rules.” (‘God is a butcher’: [http://everything2.com/index.pl?node\\_id=1547840](http://everything2.com/index.pl?node_id=1547840))

Neither of these metaphors means that the subject is unskillful or careless. Rather, they serve to criticize the subjects (Sharon and God, respectively) for their brutality and lack of compassion.

The butcher-surgeon metaphor in our example means that the surgeon has acted in an unethical manner (whether due to lack of skills or not) and supposedly there are contexts in which the same utterance would mean the surgeon is unskilled/incompetent, though we have yet to see an analysis of an actually occurring example. The intuition may very well be correct, but so far no empirical evidence has been presented. However that may be, the theoretical point here is that the phrase “is a butcher”, used metaphorically, does not have a predictable meaning independent of the context of its use. The target subject is brought up as a topic for a reason. The situational context determines what is considered relevant about the target space and this framing, in turn, influences the framing of the source.

### 3. Spaces and domains

In terms of conceptual metaphor theory, the input spaces display contents from distinct experiential domains (domains of lifeworld experience), one input being a scenario including “this surgeon” from the target domain of surgery, the other being a scenario including “a butcher” from the source domain of butchery. Butchers work on animals in abattoirs or shops, surgeons work on human beings in hospitals or clinics; in terms of social theory, one is related to basic production and distribution, the other to reproduction and service. Surgery is a part of a scientific medical discipline, butchery is a prominent aspect of gastronomic craftsmanship. As already mentioned, it is a general feature of metaphor that the input spaces be from different domains.<sup>16</sup>

These spaces — the space of surgery and the space of butchery — are set up in a Semiotic space. The *Semiotic space* is the space in which utterances are uttered and come to mean whatever it is they are supposed to mean. It is a space of expressive *signification* as such, and is the base of all further space building, hence the alternate name ‘base space’, not to be confused with Gilles Fauconnier’s notion by the same name. In Fauconnier’s (1997) terminology “the discourse *base space*” is a space vested with the speaker’s belief, a reality space according to the speaker.

This space is later referred to as “the Base” (and in later mental space theory (MST) literature simply as “base space”; cf. Fauconnier & Turner, 2002) and defined as: “a starting point for the construction to which it is always possible to return” (Fauconnier & Turner, 2002, p. 49). Base space, in this conception, is heir to “space R” in Fauconnier (1994, p. 17), which got its name from the idea of a “speaker’s reality” which could then embed — or “parent” — other spaces. To see the difference between the two notions of base space, consider the following statement from Fauconnier (1994, p. 161): “In a speech situation, the fact that something is said is pragmatically salient; the space of “what is said” is set up.” Evidently there is no clear distinction between “the fact that something is said” and “what is said”. As a consequence only one discourse space is needed in MST: a space concerning what the discourse is *about*. This notion of “base space” is ontological rather than semiotic. It is the *belief* relative to which other semantic content is structured, and is the starting point in analyses of tense and mood, for instance. Speaker’s reality is the ontological *base* — or reference point — for determining the status of other related spaces, for instance hypothetical or counterfactual spaces and contrasting belief spaces.

On a semiotic account, by contrast, a base space, or a discourse base space, is a representation of the speaker’s act of engaging in meaning construction. It is the *saying* of what is being said, the very act of signifying. *The saying* and *what is said* are taken to be two different matters, and hence they are represented separately. The semiosis (the situation in which utterances or other exchanges of signs occur) is the base for space building. It is the ground on which spaces are built. As such, it is closer to Langacker’s notion of ‘ground’ than Fauconnier’s notion of ‘base space’: “The term GROUND (G) refers to the actual speech event, its participants, and its immediate circumstances” (Langacker, 1999, p. 79). A semiotic base space has as its content “the fact that something is said”, with all that it entails, and this semiotic event is taken as the base for any (further) space building, anchoring meaning construction in enunciation.

A semiotic (base) space is a mental space in which the cognizer represents the present situation of cognizing. It is either a scene of communication, involving the persons participating in shared meaning construction through the semantic network considered, or a scene of reflection involving the reflecting subject and the situation in which the reflection takes place, as represented by the subject. It is thus assumed to be the case, phenomenologically, that when people communicate, they represent the situation of communication, and this shared representation is a prerequisite for meaning construction.

### 3.1 The semiotic base space

The semiotic base space, that we wish to introduce and take into consideration, consists of at least three types of determinations, which we could represent as a

concentric disposition of three spheres: an inner sphere of circumstances pertaining to the expressive act as such; this sphere is contained in a larger sphere comprising circumstances that characterize a specific situation as framed by the participants; and finally an outer sphere comprising such conditions that are universally given in the human phenomenological life-world (or pheno-world).

To 'make sense', to think or communicate, is to operate from inside this pheno-world that determines our acts and processes of signification. This signification, or 'semiosis', whether it be an act of communication or of private thinking, is thus always part of a *situation* which serves as background; in this instance the signification is communicative and takes place between two people in a hospital room. The speaker is recovering from an operation, the topic of conversation is a scar that is part of the perceptual environment, etc. There may have been other patients in the same room but if so, they are not construed as relevant and so are not part of the description of the situation. A situation, then, consists in the relevant aspects of the immediate environment and whatever aspects of the past and future are of consequence to the interpretation of the present.

The situated semiosis is contained in a *phenomenal world*, by which we mean the world as it is accessible to human thought, including the physical world with all its features and regularities and constraints on human action, as well as beliefs and counterfactual realities. The phenomenal world (or 'pheno-world') consists of everything that can serve as objects of thought, regardless of any belief in their existence outside of the minds of the cognizers. It is the realm of subjective and intersubjective experience, including things like butchers, which we believe exist independent of our thinking of them, and the winning lottery ticket we did not buy last week, which exists only by virtue of its significant absence. The pheno-world and the specifiable situations encompassed in it offer an infinite supply of possible spaces to the cognizers in Semiotic space. That is, any feature of the situation or the humanly accessible world at large can potentially become relevant to cognition.

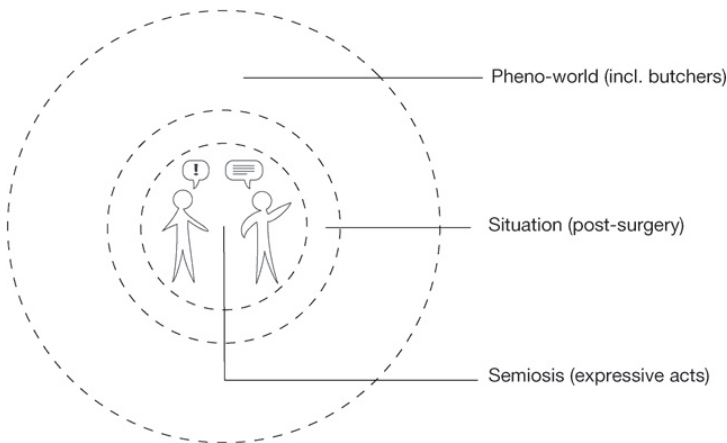


Figure 1.

### 3.2 Reference and presentation

From the Semiotic space, where the utterance is produced, a topical space is set up; this is what we call the Reference space. In Fauconnier & Turner (2002), there are occasional references to “focus inputs” and to “topic spaces”. Perhaps this provisional nomenclature is motivated by a similar semiotic intuition, although it is not explicitly discussed (cf. e.g. Fauconnier & Turner 2002, pp. 128, 352).

This space-building process corresponds to step 1 in the above specification of five distinguishable levels of meaning. Reference space relates to actuality, in contrast to the content in the predicating space. In our example, the Reference space is set up by an explicit and deictic space-builder (“this surgeon”). In other instances it might be built from contextual, non-verbal cues (if, for example, the surgeon believed to have caused the scar enters the visual field of the speaker and she mutters “Butcher!”, or “Here comes the butcher!”). The space-building is deictic; the referent of the expression is predicted by the specific circumstances of the enunciation.<sup>17</sup>

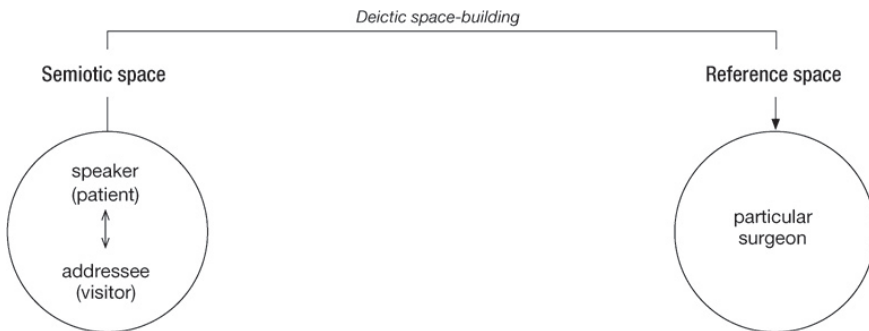


Figure 2.

One space, however, is not enough. We need to set up two more spaces to apprehend the utterance as a metaphor: a Presentation space and a Blended space. The Presentation space is highly figurative, though it also contains force-dynamic structure, most of which does not become salient until later in the process. In the blended space, ‘the blend’, the referent (A) is presented *as if* it were identical with the content in Presentation space (B). This identity link is *virtual* by definition; if it were actual there would be only one space, a Reference space. It is in this virtual sense that A can be said to be B: in the blend A is B. Virtuality, we propose, is what makes a blend a blend. By *virtuality* we mean the very as-if-ness that characterizes a mental space blend. The blend (of the Reference space and the Presentation space) is treated as if it was real, and it yields real inferences, even though it is not vested with belief. Virtual spaces are momentary fictions that yield lasting inferences.

In Langacker’s terminology, our butchering surgeon exists on a “virtual plane” (the notion of “planes” corresponds to the notion of “mental spaces”) while the

surgeon exists on an “actual plane”. In his article “Virtual reality” (1999), Langacker proposes a distinction between *virtual* and *actual* entities in linguistic representation, and demonstrates how ubiquitous virtuality is in natural language use:

“Surprisingly much of our linguistic effort goes into the description of VIRTUAL entities, even when our main concern is with actual ones. [...] Entities that are not part of actuality are visualized as occupying a VIRTUAL PLANE, which is distinct from the ACTUAL PLANE despite certain correspondences between them.” (Langacker, 1999, p. 78)

Metaphor is a poignant example of this, as it involves entertaining ideas that are not vested with speaker belief. Such representations — of virtual entities and relations — are meaningful, nonetheless, because they are *about* actual situations. The blend is a virtual representation which specifies something about the reference — the “actual situation of concern”.

“This imagined entity [the blend of the target and the source] corresponds to [the source entity] but does not exist in actuality. It is the virtual, fanciful correspondent of a real entity, one that instantiates the metaphor and functions in lieu of the real entity for purposes of making the metaphorical predication. This predication is thus a VIRTUAL structure evoked to describe a facet of REALITY. [...] Only via and in relation to what is said about the blended structure do we draw the intended conclusions about the actual situation in the target domain [...]. The blended structure is a kind of virtual representation created in order to indirectly specify something concerning the actual situation of concern.” (Langacker, 1999, pp. 80–81)

In Figure 3, the (actual) subject (this surgeon) is blended with the metaphoric predicate (a butcher) in a virtual blend: it is understood that one entity is to be seen *as* the other.

The conceptualization, at this stage, consists in a crude mapping between the two input spaces and projections from these inputs to a Virtual space. These projections are rudimentary and not yet selective, so at this point there is no emergent meaning to be understood. What is understood, however, is that the predication is metaphoric, and hence that the surgeon is a butcher with respect to particular aspects of his being or of being a surgeon — aspects not mentioned in the sentence. At this stage in the analysis (corresponding to level 2: metaphoric space-building) it has not yet been specified *how* the surgeon is a butcher.

As has been mentioned earlier, the inputs are functionally distinct, one being a *source* and the other being a *target*. This asymmetry is reflected in the distinct labels for the two spaces; Presentation space and Reference space are two *types* of spaces. The distinct functionality in question is clear in our example: the surgeon is *deictically* given, whereas the butcher is *generically* given.<sup>18</sup> Language renders its genericity by morphological means, here by the determiner of the nominal, the morpheme *a*: “... is a butcher!”<sup>19</sup> The generic category (a butcher) is a metaphorical

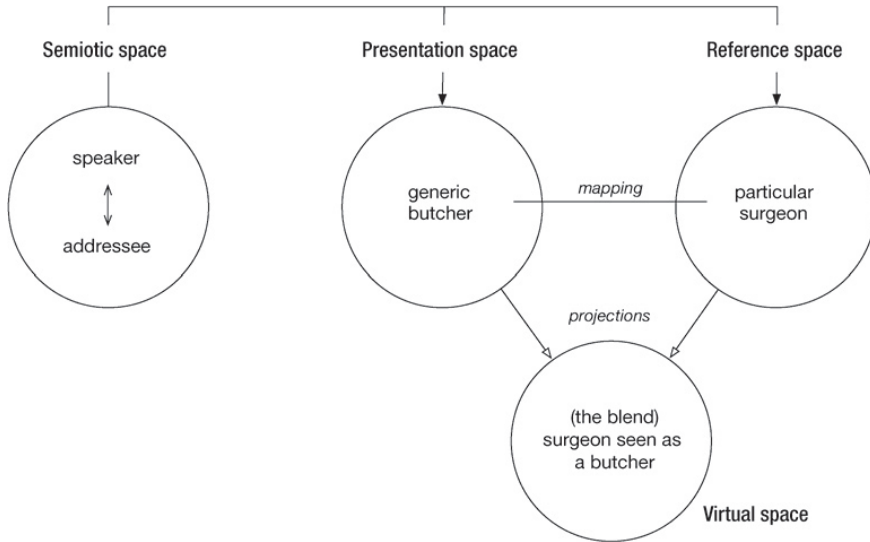


Figure 3.

predicate of the deictic category (the surgeon in question), which is linked to the deictically given scar (“*This* scar does not look right!”). There are *roles* in both spaces — but in the case of ‘this surgeon’, the role of surgeon is believed to have a filler. A specific surgeon was believed to be denoted by the expression in this example; but solely in his capacity of fitting the description, so should it have turned out it was in fact not *that* surgeon but a different one who had performed the surgery (say, there had been a switch while the patient was anaesthetized), it would be this other surgeon the speaker meant and she would still have said something that could be assigned a truth value. That is, the propositional content of her statement would still be one with which the addressee could agree or disagree. The speaker, acknowledging her mistake, might say “Well, whoever did this to me is a butcher!”, where *whoever did this to me* is a description that the speaker has not committed to finding a referent for, even though she believes there exists such an individual.<sup>20</sup> She also has a belief as to who that particular individual is but the essential thing is that *someone* is believed to fill the role. The definite description “this surgeon” is used *attributively*, meaning whoever left the scar in question; whoever it is, there *is* someone, and this someone is to blame. It is in this sense that the role ‘surgeon’ has a filler: the utterer believes that someone is ‘a butcher’ and whoever that individual is, this is the referent of the predicate.

In Reference space, a role is conceptualized as having a filler, and often the topic of reference is a *particular* filler. In a 2002 article in a local American newspaper,<sup>21</sup> the journalist refers to the then Palestinian leader as a “butcher”, which then comes to serve as an argument for deeming him unfit for the role, the role of *leader* (just as surgeons should not be butchers, political leaders should not be butchers): “It’s time Arafat stopped making excuses. He has proven he is not a



leader but is still the same terrorist butcher he was 30 years ago.” In contrast to our surgeon-butcher example, the intention of the utterer in this example is to refer to a particular individual (independent of any description), asking the reader to see this person, equipped with a proper name, as a butcher.

In Reference space, roles are relevant characteristics of fillers who may, but need not, be referred to by the utterer. These fillers can be referred to because they have denotations in the pheno-world. In Presentation space, by contrast, roles are not filled by particulars, and if an individual is presented, this individual is presented *as a role*.<sup>22</sup> The description “a butcher” is not thought to denote any particular butcher, whereas “this surgeon” is. If the speaker had been hallucinating and there had been no surgery, and hence no surgeon to blame for any scar, the addressee could not agree or disagree with the metaphor. It would be neither true nor false<sup>23</sup> under the attributive reading; if no one fits the description there is no subject to take the predicate. In our example, however, the consensus is that what is referred to by the definite description “this surgeon” is an attribute which does have an entity fitting it. It is important to note here that the meaning of the definite description in question is pragmatically disambiguated. Meaning is a function of the speaker’s intention as expressed by the phrase, sentence or textual segment. Meaning is context-dependent, both in relation to the context of surrounding textual environment and to para-linguistic factors (such as, in this example, the situational context).

### 3.3 Relevance space

Having set up a preliminary blend of a butcher space and a surgeon space (Figure 3), the cognitive task is to determine what the blend is supposed to mean. We need a relevant framing of the surgeon space to guide further mappings between the inputs and to motivate the selection of projections to the blend. The surgeon is a butcher, but how? — With respect to what? This level in the analysis corresponds to level 3 (projected structure in the blend, see Section 2).

The relevant framing here is the speaker’s situation; the surgeon has operated on the speaker and left a scar that is now the topic of conversation in the recovery room. Now we have a little story in Reference space, which, in turn, motivates our framing of the butcher space. Since the relation between the semantic actants of agent and patient is in focus in Reference space, this framing also comes to shape the content of Presentation space: an agent is acting on a patient, and our attention is allocated to what happens to the patient. In the blend, the agent is simultaneously a butcher and a surgeon, the act is both butchery and surgery, and the patient is both a piece of meat and a medical patient.

The *scar* on the patient in Reference space does not map onto anything in Presentation space. Because it is there, we know the construction is metaphorical; the utterance predicates something about the surgeon in relation to something

contextually specified.<sup>24</sup> According to the speaker, the scar is not as nice as it should have been. In Virtual space, where we imagine the surgeon's job performed by a butcher, the figurative dramatization helps us see why this is the case: The butchering surgeon is brutalizing the patient. In both inputs, an agent is taking a sharp instrument to an immobile body, but since the patient is topical, the discrepancy between the human body (the referenced entity) and the dead body of an animal (the presentational entity) is critical. And seeing this discrepancy is crucial for getting the metaphor. It may also be that there is a discrepancy between the instruments used by the agents, but imagining the instruments as part of the virtual scenario is not crucial for understanding the metaphor, so we have no reason to claim that this aspect is part of the meaning. Adding this optional feature, though, adds to the figurativity of the butcher space and, as a consequence, to the emotional impact that the metaphor may have on the addressee, because an experientially more dramatic predicate intensifies the predication.

That it is a butchering surgeon and not the other way around comes from the fact that the two inputs are asymmetric. Since one input functions as a predicate of the other (the subject), the agent is more surgeon-like than butcher-like, in the mental simulation, and the patient is more patient-like than animal-like (i.e. the dative recipient of the act is more so human than non-human), while the act is more butchery-like than surgery-like. Or, put differently, we see the butcher as a surgeon, and the dead meat as a human recipient, while we see the act of surgery as an act of butchery. Or, in yet other words, when we experience the two scenarios in the blend, the referential subjects (the surgeon and the patient) are more vivid than the predicate subjects (the butcher and the dead animal), and, conversely, the predicate act (butchery) is more vivid than the referential act (surgery).

The discrepancy between a surgeon-like versus a butcher-like attitude to the patient of the act (a lifeless body of meat versus a recipient of medical attention) becomes apparent when the blend has been structured according to what is *situationally relevant*. Rather than conceiving of the input spaces as experiential domains (the domains of butchery and surgery, respectively) with encyclopedic knowledge, parts of which are then projected while others are *suppressed*, the inputs are viewed as mental spaces set up for a specific purpose, with content that pertains specifically to the topic of conversation.

Different framing scenarios may be tried out in a mental simulation, though in this particular case apprehension is immediate. When dealing with examples of communicational misunderstandings, however, one pertinent task would be to compare the respective conceptualizers' different framings of the inputs, and hence how the resulting inferences differ.

The process of framing the inputs can be described as an *elaboration loop*: "elaboration" because the topical focus (in Semiotic space) determines how the content of the input spaces is structured and elaborated in the process of comprehension (running the blend) or in ongoing discourse (the process of adding to

and altering already existing spaces for whatever expressive purpose), and “loop” because this framing process is open-ended and reciprocal. That is, online adjustments or alterations in the course of a mental simulation can happen (since it is an online dynamic process), and alterations in one space can influence the framing of the other spaces.

*Situational relevance* is distinguishable from the other two types of relevance outlined in this article<sup>25</sup> by its effect on the *framing* of the blend: what is projected from the inputs, and how the projected content is structured in the blend. The concept of an elaboration loop thus offers an alternative explanation to “selective projection”, if by selective projection we mean partial representation of encyclopedic knowledge of the domains in question, or is a specification of how selective projection occurs, in the sense that the content projected to the blend is selected based on how the inputs are framed. The framing of the inputs is contextually motivated. The presence of the scar and the preceding surgery are situationally relevant factors in the construction and comprehension of this particular occurrence of the butcher-surgeon metaphor. This attentional focus affects a framing of the Reference space, according to which the relation between the surgeon and the (scarred) patient is prominent (whereas, for instance, the tools used in the act are not). This contextual framing of the surgeon scenario influences the framing of the content in the Presentation space. The result is a butcher scenario whose prominent feature is the relation between the butcher and the entity acted upon: the body of a dead animal. These two — now contextually framed — scenarios make up the two semiotic layers of the blended representation in Virtual space, and it becomes clear in what specific sense this surgeon is a butcher. The unempathic attitude of the butcher, appropriate and necessary in the act of butchering, becomes the prominent aspect of the predicative representation in the blended scenario.

The structure that the inputs have in common, the shared structure (“generic” structure in Fauconnier & Turner’s terms), is specified by what is situationally relevant. It is thus not cognitively realistic that this structure exists in the mind as a definite list of entities and relations independent of a goal, a purpose, motivating the conceptualizer to evoke these similarities. As with other categories, the category “shared structure between the inputs” is context-sensitive. Though it may be analytically possible to construct such an exhaustive list for every blend, it is not phenomenologically plausible that such a list is evoked in the mind of the conceptualizer in order to construe the meaning of a blend.<sup>26</sup>

It is of course possible to abandon the idea of there being an encyclopedic list of shared structure present in the mind of the cognizer doing the blending, and still maintain the idea of there being a list of shared structure belonging to situationally framed mental spaces and not to entire encyclopedic domains, a list represented separately from the inputs in a “generic” — or “shared structure” space, though no one has taken that position so far. Our position, however, is that we would need phenomenological motivation for positing the existence of such a representation.

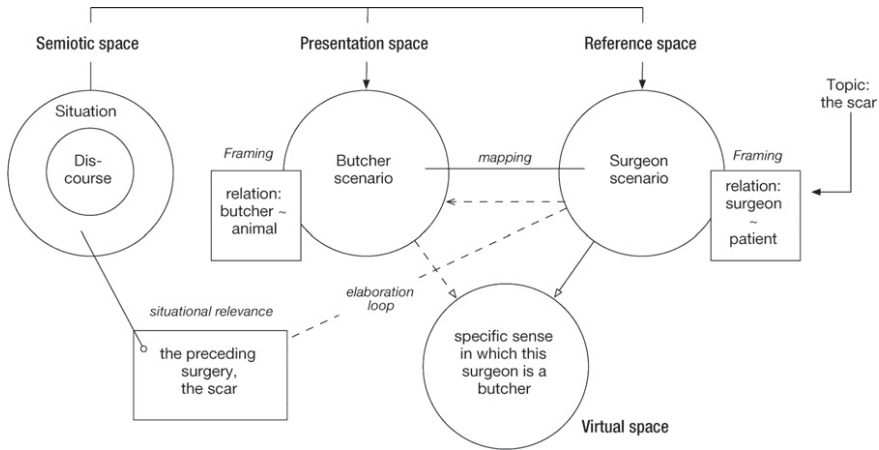


Figure 4.

The existence of shared structure explains how elements in the source and the target inputs can be fused or contrasted in a blend, which is something that evidently happens and that we can experience. It explains why some spaces are felt to “fit” while others do not. We have good reason to believe that inputs have shared structure. We have no reason, however, to believe a generic space is set up, containing this structure: its presence does not explain anything, which is probably why it does not figure as a component in the prose accompanying BT blending diagrams representing metaphoric meaning construction. It is absent from the verbal descriptions of how the meaning is derived, and in some cases even from the diagrams themselves.

We hope to have made it clear that these issues are not merely a matter of stylistic differences in the diagramming, as may appear to be the case at first glance, but reflect philosophical and methodological differences that should be addressed in future discussion on blending.

Figure 4 represents the cognitive process we believe to be involved in selective projection of input to the butcher-surgeon blend, as described above (cf. situational relevance).

The salient part of the scenario in Reference space is the patient, who is deictically given (she is the *I* that can say “look what he did to me!”), and so the surgeon is a butcher *with respect to* how he has (mis)treated the patient. He has left a scar that is deemed unpleasing to the eye, and, importantly, this is thought to have been an avoidable outcome. He evidently did not prioritize making the scar look as unnoticeable as possible (this is the counterfactual outcome; he *could* have) and is faulted for failing to do so.

The selected framing, in turn, motivates a relevant *schema*, which makes the evaluative meaning emerge. What our scarred speaker wants to convey is that the surgeon’s attitude of indifference towards her is unethical.

### 3.4 Relevance and emergent meaning

The Reference space has temporal depth, extending from the past (the surgery) to the present (the post-surgery situation), to the future (the prospect of living with the scar). The virtual scenario, which represents an actual past event in the blend (now framed in accordance with what is situationally relevant), carries over into the present where the agent, as well as the causal result, of the act are evaluated. The metaphoric import is projected back to Reference space, by virtue of having been recognized as an argument in the communication between speaker and addressee in Semiotic space. That is, the emergent meaning of the blend is projected back to the semiotic base, where it influences the participants' shared conception of the topic of conversation and the further development of the dialogue taking place. Thus it has implications both for how the Reference space is framed in future communication (the framing of the reference becomes a shared frame of reference) and for how the dialogue progresses in Semiotic space.

It is interesting, from a cognitive perspective, and with regard to emergence of meaning in meaning construction, how the blend in Virtual space comes to serve as *argumentation* for the speaker's point of view. We need to account for the cognitive mechanism that allows the metaphoric meaning to emerge in the blend. Our suggestion is to include in one's analyses of virtual blends the schematic background knowledge that makes it at all relevant for the conceptualizers to blend the two inputs, to describe the schematic content of the knowledge applied to the blend, yielding the emergent meaning. This semantic content may or may not be represented as a separate mental space, depending on the individual conceptualizer's conscious awareness of it. It should be included in any analysis nonetheless, regardless of whether it is represented as a mental space, however, because it is an essential part of the meaning construction process. Whether the conceptualizer makes a cognitive effort in identifying the intended schema, and hence constructs a mental space, or makes no such effort and gets the meaning without construing a representation of the issue that makes the presentation (the source) relevant to the reference (the target), it is present in the mind, since the meaning would not emerge without it. To the analyst, though, this applied background knowledge will necessarily be represented in the form of a mental space, because it takes considerable analytic effort to, not just identify, but actually describe it, rendering its schematic form as it might be represented (more or less overtly) in human cognition. These schemas are a resource in the pheno-world, that is, the outer "layer" of the semiotic base space. It is represented in a space characterized by affording *argumentational relevance* to the blend, and as such contributes to the framing of the blend. We propose calling this space *Relevance space* since it contains knowledge of the issue the speaker has in mind when evoking the presentation as a sign for the reference. It provides the relevant thought content for the framing of the blend

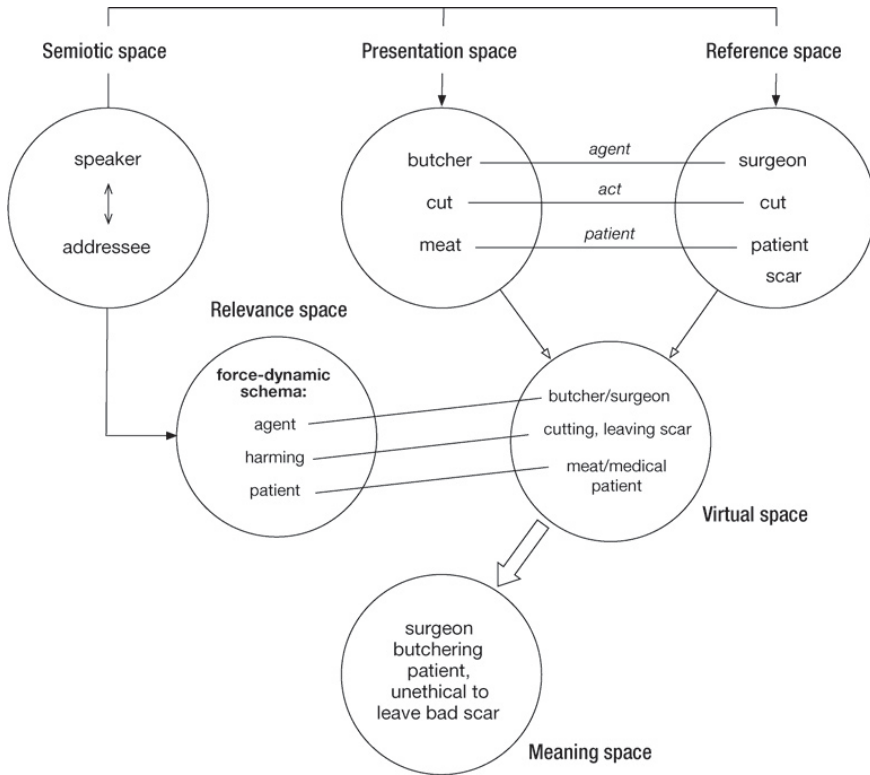


Figure 5.

(at levels 3 and 4) and, ultimately, for the emergence of reasonable inferences at the pragmatic level (5).

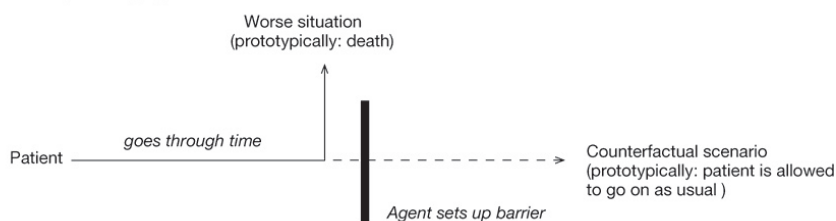
The metaphoric meaning is a product of a mapping between the blend, in its pre-emergent-meaning state (the blend prior to emergence of relevant inferences), and some *relevant schema*, which structures the blend and makes its strange figurativity meaningful. From the perspective of an addressee, a blend may attract different schematic mappings depending on what structures can be construed as shared between the inputs and what has been established as situationally relevant to the communication. From the perspective of a speaker, the relevant issue will determine the range of possible presentational scenarios, and the adequacy of any individual candidates. The mapping motivates the projection of the relevant schema to the blended representation, structuring it as a narrative about the reference (extending from the past to the present to the future, as mentioned above).

The appropriate schema for the evaluation of the brutalization of the patient is a skeletal, force-dynamic story of how one person's act influences another person's situation and leaves this other person in an improved or unchanged or worsened situation. Is he better off? Not influenced in any significant way? Worse off because of it? This schema is directly relevant to the understanding of the utterance as an

emotional evaluation; it is signified by the emotional expression of the speaker, and since it can be apperceived as a genuine part of that emotion, it appears as a separate *relevance-maker* (in Relevance space).<sup>27</sup> It is the basic schema found in the evaluation of human acts, so we might call it *the ethical schema*, or the schema for evaluating acts as ethical/unethical. Acts are evaluated in terms of helping or harming. When people are said to help each other, the verb “help” prototypically refers to its object’s life and death<sup>28</sup> — the life and death of an individual — and means ‘making it easier for the individual to stay alive’, whereas the verb “harm” (as in wrong-doing and evil-doing) means ‘making it difficult for the individual to stay alive’ (the ultimate form of harm, therefore, is to end the life of the individual trying to stay alive).

The ethical schema (of harming and helping) may be diagrammatically summarized through a force-and-barrier schema. In such schemas, agents can be represented by conflicting forces as in the causal *letting* schema of Talmy (2000, p. 424), where an agonist is affected by an antagonist acting as a barrier to a flow or a moving entity, and the weakening of the antagonist then ‘lets’ the agonist roll/flow/live on. To help someone corresponds to weakening a barrier for this person; to harm someone corresponds inversely to reinforcing the barrier that opposes the movement/life of the person. The dynamic principle applied in this framework can be graphically rendered in the following manner:

Harm done to patient by agent:



Help offered to patient by agent:

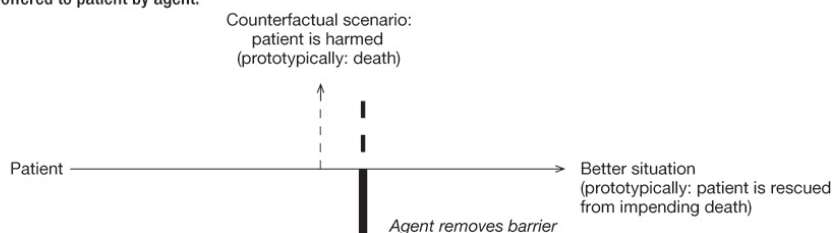


Figure 6.

The activation of this schema in the network is reinforced by the contrastive superposition of a prototypical ‘helper’ (a physician, a surgeon), a craftsman of life, and a craftsman of death (a butcher). The latter, it should be noted, is not prototypically



a 'harmer'; butchers perform a service instrumental to sustaining life: providing nourishment. Only from the viewpoint of the animals could the butcher be conceived of as a harmer. The butcher, as he appears in our Presentation space, also does not do any killing, because killing is not part of the relevant framing of the butcher scenario (as motivated by the framing of events in Reference space); cutting the already dead animal into smaller pieces is.<sup>29</sup>

In this metaphor, however, the butcher does become a harmer. This happens because the dramatic scene of the blend is construed from the viewpoint of the patient of the act — the human acted on in Reference space — which is where our sympathy is vested, and this allocation of attention and sympathy carries over into the butchery space. In the blend, the butcher *is* a harmer, because he is viewed from the vantage point of the patient — who is a dead animal but who is also a living human being.<sup>30</sup>

The speaker/patient is *helped* by the surgical operation (she is relieved of suffering), but she is also *harmed* (by the scarring) and hence is worse off than she otherwise would have been. The scar is believed to be harmful to her existence as a woman, and not having such a scar is the ideal, but counterfactual, situation she measures her present, actual, situation against. The ethical schema applied to the blend has the scarred patient as the patient of the act and the surgeon as the agent constituting a barrier to the 'ideal program': for the patient to continue her existence, her beauty unaffected by dermatological disfigurement:

Harm done to patient by surgeon:

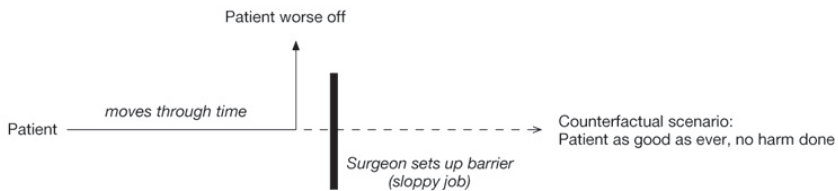


Figure 7.

Let us add, as an extension of our reflections on the relations holding between the Semiotic base space and the Relevance space, that it might be useful to distinguish a number of layers in Relevance corresponding to the suggested stratification of the Semiotic base space. *Relevance* could be seen as composed of three types of phenomena: the expressive base is the origin of *illocutional* relevance, determined by what is happening in communication — here, in our example, a speech act of requesting reassurance is felicitously performed. The situational base creates *situational* relevance — here the framing of the inputs, including the scar in question. Finally, the pheno-world is the origin of the *argumentational* relevance that makes description and evaluation possible — here, the ethical schema.

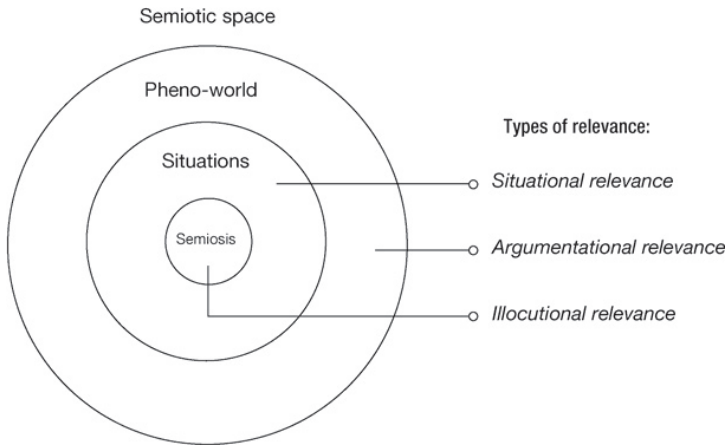


Figure 8.

### 3.5 Meaning space

The content of what we may call the Meaning space is the blend structured by the ethical schema. The Meaning space is a properly framed Virtual space: a post-emergent-meaning space. The completion offered by this dynamic schema is crucial to the meaning, which does not exactly “emerge in the blend”, yet does emerge, namely in this interpretive process, by which the meaning of the utterance is produced. If this structure is replaced by a different dynamic schema, the meaning of the utterance will change.

We can imagine alternative situations in which the utterance would have different interpretations: if, for instance a superior is talking about one of the employees at a staff meeting, discussing whether to keep this person on staff — call him M.D. Smith — and says “This surgeon is a butcher!”, this could be taken to mean that this surgeon has a history of endangering patients’ lives. In this example the same ethical schema is employed, only the example differs with regard to situational relevance and illocutionary relevance. For one, the situation warrants different pragmatic implications: what the superior may be suggesting is that this surgeon should be fired or advised to display a less reckless attitude towards patients (for the sake of the patients or for the sake of avoiding lawsuits). It could also be the case, though, that the utterance be taken to mean that M.D. Smith is not skillful enough, that he uses a scalpel the way one would use a meat cleaver. The elaborative specification of the input spaces determines what emerges in the blend, and this emergent meaning, interpreted also as pragmatically relevant in some specifiable sense (cf. illocutionary relevance), shapes the inferences that arise in response to the metaphor. Misunderstandings, at this point in the process, result in erroneous inferences, because alternate meanings will emerge. Here the utterer is evaluating the quality of a (particular) surgeon’s work, a meaning that emerges

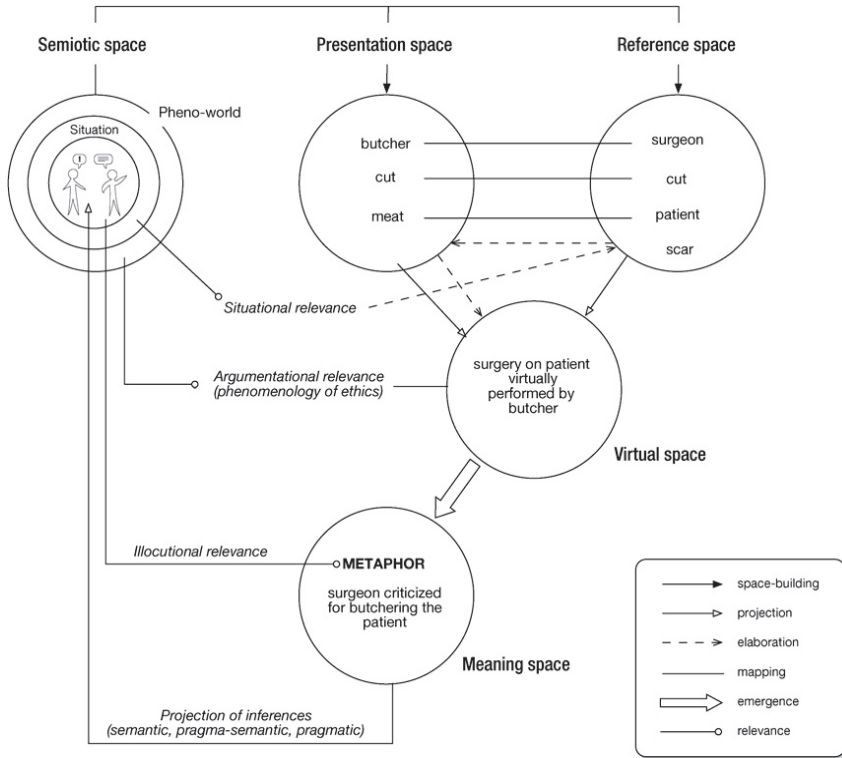


Figure 9.

by recruiting some force-dynamic schema which makes the surgeon's professional incompetence apparent (cf. argumentational relevance).

Note that "this surgeon" is used referentially, not attributively, in this little made-up example. If the superior had suddenly come to the realization that it was in fact not M.D. Smith but M.D. Butcher who was causing trouble, he would have to concede he had made a false statement.

This fabricated story (in its different versions) serves to illustrate the importance of *relevance*. With examples like these, though, we are relying on plausibility. That is, we are assuming we can all agree it is a plausible story. It may be, however, that such a metaphor would never be employed under such circumstances, which is why the scarred patient story (of which two variations have been witnessed; the one reported here and one in which the speaker is talking to a friend after a mastectomy) proves a better candidate for analysis. When forming generalizations about meaning construction we should look at what people do say and not what we, sitting at our desk, can imagine them saying.

The emergent meaning — the evaluation of the surgeon in relation to the scar — motivates certain inferences which project back to the speaker-addressee interaction: the addressee interprets the use of the metaphor *as something*, namely as a request for reassurance and infers what he should do and say next, in response.

Figure 9 shows the whole blending network, comprising all the different levels of comprehension.

The question “What does that mean?”, were it asked in response to the utterance “This surgeon is a butcher!”, could be answered at five different levels of explanation: the speaker could explain (1) what the lexical entry “butcher” means (or any of the other words or phrases); (2) that it is a metaphor; (3) that the surgeon handled her anaesthetized body the way a butcher would handle the body of a dead animal; (this sort of explanation greatly reduces the affective potency because it is merely descriptive, whereas the metaphor evaluates the act referred to) (4) that the surgeon should have thought of her as someone who would have to live with the scar for the rest of her life; (5) that she has good reason to be upset; that the addressee should help her believe the harm is not as detrimental to her existence as she presently feels.

Each of these replies would be adequate, depending on what part of the network needed filling in.

#### 4. The semiosis of a mental space network

The general network proposed has a semiotic design.<sup>31</sup> The space which functions as the base for further space-building is one in which communication, thinking or other acts of signification are taking place. From this space two input spaces are set up. One is a Presentation space, the other is a Reference space. In Peircean terms, a *Representamen* (the signifying sign) is introduced in the Presentation space, while the Reference space introduces an *Object* (the object signified). These spaces contribute to a Virtual space, the content of which is structured by an *Interpretant*, which specifies how the sign is to be interpreted, for instance whether it is under negotiation (in order to determine its illocutionary status), and whether it is iconic, indexical or symbolic. If, for instance, a speaker says to an addressee “Here comes the butcher!”, indicating a perceptually salient individual as the Object, this speaker might be referring to an iconic similarity: this individual looks like a butcher (said to amuse the addressee). Another possibility is that the predicate ‘butcher’ is somehow indicative of the surgeon’s character or behavior (in which case he has produced a metaphor). Yet another possible interpretation is that the individual’s last name is Butcher (there is a symbolic relation between the proper name and the individual; the speaker is making a pun). The metaphor we have been discussing has iconic, indexical as well as symbolic sign relations. The virtual scenario in the blend is as such iconic; the relation between the presentational and the referential counterparts is one of similarity. The butcher icon in the blend is in turn a ‘signifier’ of a symbolic ‘signified’, namely the surgeon’s ethical wrong-doing, of which the scar is an indexical sign that lets the speaker ‘signify’ the illocutionary pragmatic meaning to the addressee.

It is always possible to understand such networks of virtual blending of mental spaces in terms of sign relations — whereas it is not the case that all sign relations are blends of mental spaces: mental spaces are scenarios, and obviously not all signs are scenarios. Inter-scenarial signs have Presentational expressions, Referential contents, and Relevance-establishing ‘codings’ by which they make sense in the Semiotic space in which they occur.

The model below (Figure 10) illustrates the overall structure of a semiosis in terms of mental spaces. Signs that are not blends of mental spaces should of course not be analyzed in terms of Presentation spaces and Reference spaces etc., though the general structure of the network is the same.

This mental space architecture includes diagrammatic elements that ground the meaning in discourse (whether private or interactive). As Fauconnier & Turner (2002, p. 55) note in passing, it is in the interest of cognitive semanticists to make falsifiable predictions about “how the formation of a blend depends on the local purpose”. Such a purpose exists in a Semiotic space where discourse participants use expressive means such as metaphor to have each other ‘see’ something a certain way. To understand what the speaker means is to ‘get’ the relevance

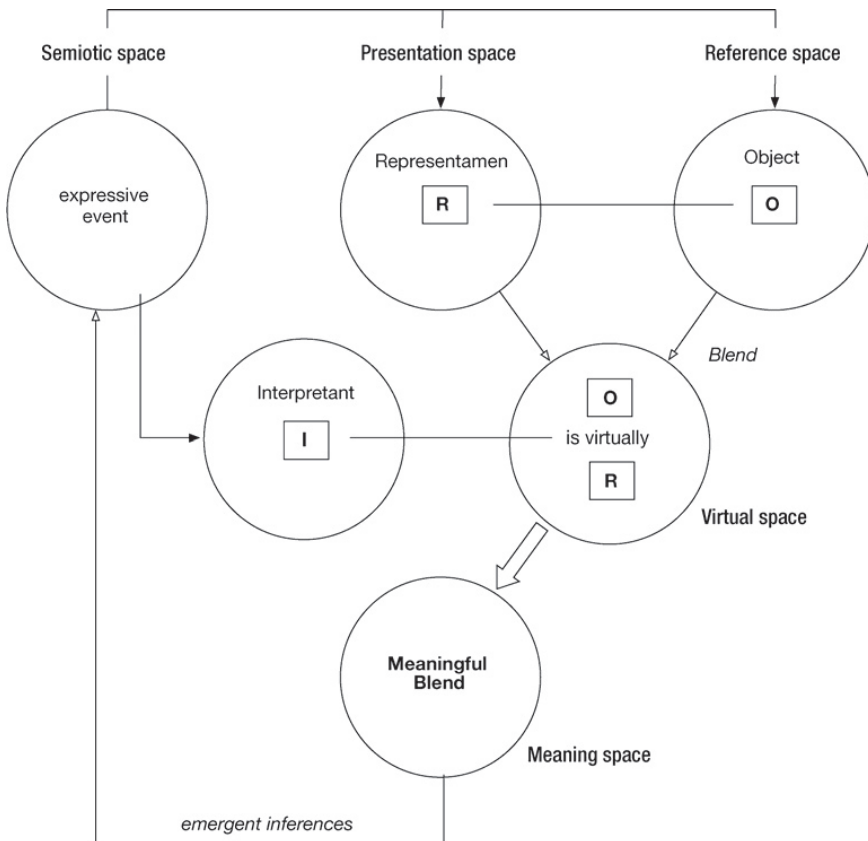


Figure 10.

right (Relevance *space*, insofar as the speaker is conscious of the ‘getting’), so that *completion* of the blend can occur, to use Fauconnier & Turner’s terminology. Relating this model to the framework proposed in Fauconnier & Turner (2002), we might say that Relevance space corresponds to their notion of a frame completing a blend (cf. e.g. Fauconnier & Turner, 2002, p. 43), effecting what can be called a pre- and a post-emergent-meaning blend, respectively (Virtual space and Meaning space). However, we would emphasize that the structure of such relevant frames is analyzable and should figure in the network diagrams, and furthermore that some cognitive work is necessitated by such a completion; it is true that the conscious effort may vary from example to example but without awareness of this relevant thought content the blend cannot yield any emergent inferences and thus, in this sense, it is questionable that the process of completion happens “automatically” as suggested by Fauconnier & Turner (see for instance 2002, p. 48)<sup>32</sup>

The blending network is a cognitive remodeling of semiosis in general, as understood in the Peircean tradition, but only in the sense that a Presentation of a Reference is necessarily an *intentional* sign relation, linking a Representamen to an Object, and that the stabilization of such a relation through an Interpretant corresponds strictly to the semiotic function of Relevance-making in the blending network. This understanding may be one of the constitutive ideas of a Cognitive Semiotics.

## 5. Concluding remarks

Studying the mental architecture of metaphor offers access to many challenging aspects of cognitive semantics. In this paper, we have analyzed the meaning of a specific metaphor and introduced it into a semiotic mental space network designed to mirror, in diagrammatic form, how we cognize metaphoric blends. This network is hypothesized to be applicable, in a generalized form, to all virtual integrations of meaning. The semiotic mental space diagram reflects the fact that semiotic blends (where one input becomes a sign for the other) are constructed online and gain their meaning from essentially being *about something*. They occur in online cognition and are context-sensitive, both with regard to how the content of the inputs is construed and with regard to the semantic and pragmatic relevance of blending these inputs. The method is to slow down our imagination so we can describe how a meaning is arrived at cognitively, from a phenomenological perspective. The resulting analysis should be recognizable to other cognizers asking the same question. Introspective accounts can be compared, and adjusted. An analysis that aims at describing phenomenal experience of meaning construction can be subject to critique and hence can become increasingly accurate, as a theory of what is going on. By contrast, blending analyses that aim to sort out meanings within a semantic realm that is inaccessible both to our senses and to our mind’s eye can not be

tested for accuracy, since the existence of the cognitive phenomena they describe cannot be verified or made plausible by any measure. We have first-hand access to our imagination, and hence we can *compare* hypotheses of mental phenomena to our experience of these phenomena, to assess the degree of correlation, while theories of the unconscious can be nothing but speculative. The representations we experience when we communicate are the meanings to be described in theories of meaning construction: these representations only signify, are only *meanings*, by virtue of being experienced by the minds that create and share them. Meaning belongs to the realm of communication and is inherently a semiotic issue. Whether we are talking to others or thinking to ourselves we are expressing ourselves, and attempting to make sense. The cognitive skill of blending mental spaces may have developed, not for abstract concepts to evolve (as proposed in the Lakoffian tradition of cognitive semantics), but for expressive purposes, at least when it comes to creating virtual representations, scenarios that have no counterparts outside of the imagination, yet aid us in developing hypotheses and beliefs.

Blending in this view is a semiotic cognitive activity, a way for us to *make sense* to one another, by engaging each other's imagination. This view differs from CMT, the practical application of which does not concern the analysis of what metaphors mean but concerns the uncovering of underlying conceptual metaphors in metaphoric discourse. It also differs somewhat from BT, although BT does in part concern itself with the meaning of intentional signs (e.g. metaphoric expressions). The problem lies in not recognizing the difference between analyzing blends that are *signs* — blends occurring in dialogue and other expressive activities — and analyzing (blended) *concepts* (the concept of Mickey Mouse, for instance). This prevents BT from becoming a framework for analyzing meaning; the very concept of 'meaning' only makes sense in so far as there is a 'signifier' that *means* something. To speak of *meaning* is to speak of the meaning of *something*. The meaning is the 'signified' part of a sign structure. Meaning is a semiotic notion.

In BT, the blending networks that are supposed to describe how a meaning is arrived at have input spaces that are not semiotically specified. They are not precategorized as a Reference space and a Presentation space (or the equivalents thereof) but are as prolific as the analyst will have them be. Each new input space is given a number (Input 1, Input 2...) and only occasionally do these spaces have a descriptive designation (such as "topic"). The inputs to the blend are not semiotically specified; the status of the blend as a *sign* is not recognized, and therefore the inputs are not conceived of as the two constituents of a sign (a signifier and a signified). Meaning, in BT, is not anchored in semiosis but, evidently, in the private mind of a conceptualizer, a mind so private only a BT analyst can access it.

The aim here is of course not to deny that cognitive events can occur in our minds without our awareness, but to bring attention to the fact that meta-cognition, i.e. introspective and intersubjectively phenomenological reflection, is necessary for doing semantic analysis. Blending is a semiotic cognitive event, and



semiotic cognition is representational. Representations are essential to the mental life of humans as semiotic agents; we represent mental contents to ourselves, whenever we are conscious, and to each other, in communication. Semiotic agents are also not unaware of the situation in which their communication takes place. Both the representation of the situation of communication and the representations of the (semantic/pragmatic) content of the communicative exchange are experienced by the participants — and by the semanticist, having understood the meaning of what has been expressed.

The difference between producing semantic data and analyzing it, is that the original cognitive event of experiencing the meaning of a sign is meticulously reconstructed in a slowed-down mental simulation. Cognitive semiotics thus has a phenomenological approach to meaning: the phenomena to be described belong to the world of human experience.

Our critique of the conspicuous absence of semiotic theory in BT also extends to Glucksberg's theory of metaphor, according to which metaphors are understood as class-inclusion statements. Recall his example, very similar to the one discussed in this paper, "My surgeon is a butcher" (Glucksberg, 1998, p. 41) — with a particular surgeon and a generically represented butcher as subject and predicate. Glucksberg (1998, p. 42) describes the butcher-surgeon metaphor as assigning a new status to *my surgeon* as "a member of the category of people who botch jobs in reprehensible and often appalling ways". Needless to say the metaphoric utterance was never actually produced in any situation and thus never made sense to anyone as a meaningful utterance. However, even if we imagine a communicational context for it, at no point in the process of comprehension do we think about the surgeon in question as belonging to the category described. The reference of the metaphor is a particular surgeon, and our hypothetical speaker would have no reason to relate the surgeon to a general class of people (who botch jobs etc.). This category is irrelevant and unnecessary for the construal of the meaning. It is a purely analytic construct. As is also the case with BT's "generic space", the representation of inclusion of 'my surgeon' in the category of people who botch jobs (see quote above) is a representation that is not experienced but is nonetheless claimed to be present in the cognizer's mind. These constructs, which are removed from any phenomenal reality, are made possible because these theories conceive of meaning as a largely unconscious phenomenon, and as a phenomenon that can be known separately from its context of communication.

A semiotically grounded theory of metaphor does not allow for analytic constructs that are not directly relevant to the cognitive process of understanding the meaning of the sign in question. It follows that one future task for blending theory is to recognize the structural and telic differences between virtual blends, constructed for the purpose of *making sense*, and other types of blends, so that the analytic tools are as specified as the objects of study are varied.

## Notes

1. This and the following quote are from the site: [http://cogweb.ucla.edu/CogSci/Grady\\_99.html](http://cogweb.ucla.edu/CogSci/Grady_99.html) (no indication of page number).
2. In the terminology of CMT, “This surgeon is a butcher” is a ‘metaphor’, not a ‘conceptual metaphor’, hence the quotation marks.
3. The manifest metaphor does not mention means and goals, so the cross-over analysis has no support in the ‘text’ of the metaphor.
4. In a later section, we will show that the network of spaces that is active in the process of metaphor production has inherent semiotic properties. The blend is a sign. We will not, however, develop a particular semiotic theory in this presentation. What is ‘semiotic’, for the moment, is simply the introduction and use of a semiotic space of communication in the analysis of the semantic process.
5. We do not claim, as Grady et al. (1999) do, that CMT and BT are offering complementary approaches to metaphor. We think such a claim is inconsistent, since CMT and BT contradict each other. Instead we intend to show that there are ideas in both approaches which can be developed in a new framework yielding analyses that can compete even with good literary readings of metaphor as to accuracy.
6. It is, of course, possible to generalize from actual uses, and we form expectations based on these generalizations. Still, such (statistically) informed expectations do not amount to predictions.
7. This point is also demonstrated in Grady et al. (1999), though the authors do not draw any theoretical conclusions from this in their discussion of the difference between BT and CMT.
8. The basic meaning of the relationship holding between complements, lexical and morphological elements in the metaphoric sentence (e.g. the genitive in “the rosy fingers of daybreak”) according to a semantically informed syntax constitutes its ‘semio-syntax’. It is, however, not our aim to discuss this dimension of the linguistics of metaphor in this paper.
9. Deontic meanings indicate states of affairs that ought, or ought not, to be the case according to some principle that the speaker indirectly embodies or represents in the act of speaking.
10. In the Humanities, linguistics is the only discipline where self-made data are sometimes accepted, and mainly for pedagogical and expository purposes. Linguists consider themselves competent informants, if they are native speakers of the language analyzed, since evaluative introspection is sufficient when the analysis concerns assessment of grammaticality.
11. The description “this surgeon” could be used to pick out an individual defined by his numeric identity and not by the attribute of being a surgeon, i.e. an individual could be referred to irrespective of his profession as a surgeon. If, before becoming a surgeon, this person had been, say, a dentist, a former patient of his, spotting him several years later in a hospital, might say “This surgeon is a butcher! He did a horrible job on my teeth back when he was a dentist!” As K.S. Donnellan (1966) points out in his paper on the use of definite descriptions (arguing against Russell’s and Strawson’s views), it is a matter of *pragmatic ambiguity*: “whether or not a definite description is used referentially or attributively is a function of the speaker’s intentions in a particular case.” See Donnellan (1966, p. 297) on reference and definite descriptions.

12. Meaning and meaning analysis are thus anchored in intersubjective phenomenology, rather than in solipsistic versions of introspection. Perhaps we need a new term — “interspection”? — to better capture the inter-subjective nature of shared introspection.
13. Our use of force-dynamic models here is directly related to Sweetser’s model applied to the analysis of the modal *may* (Sweetser, 1990, p. 60). Sweetser is in turn inspired by Talmy, who introduced it while analysing causation (cf. Talmy, 2000).
14. The generalization is that structural metaphors are evaluative (that is, metaphors whose source input is not merely a *schema* — as in “The prices went up” — but a full-fledged *experiential domain*). These “juicy” metaphors should be distinguished from so-called primary metaphors: mappings resulting in the transfer of pure topological/force-dynamic structure (e.g. the boundary schema, a.k.a. the “container schema”, or the schema for up/down orientation) without any visualized imagery. This point is further pursued in Brandt (2004, Ch. 1).
15. It is unclear how CMT would in fact analyze the butcher-surgeon metaphor. Would proponents of CMT propose that the emergent meaning can be predicted from the source category?
16. Compare “This surgeon is a butcher” to “This doctor is a surgeon”.
17. On the subject of *enunciation*, see Benveniste (1966) and Brandt (2000).
18. The determination of an object is deictic if it is referred to by an instance of *deixis*, and is generic if given as a *genus*, a genre. In Fauconnier & Turner (2002) ‘generic’ instead means ‘abstract’ (see e.g. Fauconnier & Turner, 2002, pp. 297–298).
19. It seems reasonable to recognize generic nominals like “a butcher” as inherently *virtual*. According to such an analysis, generic nominals originated as blends of a presentational fiction space with a representative unique individual and a referential actuality space with an unspecified multitude of individuals of this type. The fictive individual then comes to stand for the whole set of individuals, which is referred to and believed to exist (within some space); in the blend, this representative individual virtually is the whole category. “A butcher”, interpreted in the generic sense, is any butcher, and “any butcher” resides among the plurality of butchers in Reference space.  
 This analysis is inspired by Langacker’s analysis of genericity (see for instance Langacker, 1999) and takes it one step further, specifying what is means for an entity to be virtual; virtuality is rendered by the presentation-reference relation in the blend.
20. The rephrasing of the utterance is rendered here in order to make a point. No rephrasing is necessary for maintaining the meaning of “This surgeon is a butcher”, however, because it could have been the case that she was taken to have made a valid claim (to be considered by the hearer) even though she happened to be wrong as to the identity of the surgeon who performed the surgery. The role of “whoever did this to me” is deictically given.
21. Bob Cohen, *Palo Alto Weekly*, April 10, 2002 (p. 19).
22. If, for instance, a post-surgery patient exclaims “This surgeon is a real Arafat!”, to express that her scar appears to be the product of a brutal and careless surgeon, the indefinite article (“a”) indicates that the proper name (“Arafat”) is to be understood in a generic sense.
23. See Strawson (1950) for a similar point.

24. This point illustrates that the five levels are not to be taken as temporally contingent steps. The network is an online process (for speakers, hearers and analysts alike), where elaboration, deletion and alteration can take place at any time.
25. The three types of relevance outlined are: situational relevance (at level 3), argumentational relevance (at level 4), and illocutionary relevance (at level 5). See Section 3.4 on 'Relevance and emergent meaning'.
26. In the case of animal metaphors (like: "Achilles is a lion") the shared structure would be extremely meager; the 'generic' space would contain something like the following: Some agent... The claim to such meager spaces demonstrates how artificial a construct it is.
27. 'Relevance' in this text, as also in Relevance Theory (Sperber & Wilson, 1986), refers to the status of an expressed semantic construction that is demonstrably meaningful in the situation in which it occurs; in the framework of our analysis, it further refers to the specific structure that *makes* constructions meaningful, structure that is neither referential nor presentational in the sense explained here, and which is recruited from the Semiotic base space and in different ways connected to instances of the network we are describing.
28. Helping and harming of course mean all sorts of things in daily life and communication, but the underlying distinction: it is 'good' behavior to help and 'evil' behavior to harm, still refers to a more dramatic prototypical interaction between two subjects, one being the 'patient' of the other, the latter being responsible for the well-being (or in radical cases: the survival) of the former. This is what the schematization conceptualizes, and it is in such a dynamic schematization that the emphasis, the evaluation, and the emotion of the speaker are grounded.
29. By contrast, the butcher *is* engaging in the act of butchering in the Arafat example. Here, it is the nature of the attacks on the enemy that is referred to; the metaphor concerns the "slaughter" of Israelis.
30. This is a good example of a life/death blend, a phenomenon previously discussed in blending literature (see e.g. Turner, 1996).
31. That is: the design of a standard mental space network is semiotic, in the sense that the network as such corresponds to a semiotic function, a sign relation between sorts of structure (not between single items): the Presentation space contains 'signifier' structure, and the Reference space contains 'signified' structure — to use Saussure's terms. The Relevance space contains structure that interprets the relations to consider between the selected composite structural ingredients in the blend. The blend, therefore, corresponds to 'the sign'.
32. The claim seems especially problematic for this example since the analyzed text is a *riddle* ("the Buddhist Riddle"). The frame recruited to the blend (cf. see Fauconnier & Turner, 2002, p. 53 for a description) is the imaginary scenario that yields the very solution to the riddle; it is therefore questionable that the completion be "automatic," i.e. that the frame will automatically avail itself. For someone trying to solve the riddle there is conscious imagery as well as an experienced effort in finding the correct framing. If this were not the case, what would justify a description of this text as a riddle?

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