

Cognitive Linguistics: Current Applications and Future Perspectives

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Conceptual blending in thought, rhetoric, and ideology

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Abstract

Cultural models are idealized cognitive models of sociocultural phenomena. In this chapter, I suggest that the utility of cultural models lies in the ability of individual culture members to adapt overly simplistic models to our ever-changing social world via conceptual blending, a set of cognitive operations for combining concepts from different domains. A number of rhetorically motivated examples are analyzed to show how speakers use conceptual blending to integrate concepts with different affective valences, often so that the desired course of action is seen as consistent with their audience's value system. Processes of conceptual blending are argued to mediate the exploitation of stable conventional mapping schemes in order to adapt shared cultural models to the idiosyncratic needs of individuals.

Keywords: compression; conceptual blending theory; conceptual metaphor theory; cultural models; mental spaces; rhetoric

1. Introduction

One key component of ideology is cultural models, or idealized cognitive models of sociocultural phenomena. While these models are widely shared by culture members and figure importantly in reasoning about social issues, they are often inaccurate representations of social reality. They tend to be oversimplified and to apply more readily to some cases than others (see Sweetser 1987). Moreover, speakers can have multiple and, indeed, often contradictory models of the same phenomenon. In this chapter, I suggest that the utility of cultural models lies in the ability of individual culture members to adapt those models to our ever-changing social world via conceptual blending, a set of cognitive operations for combining concepts from different domains. Because blending relies on people's imaginative capacities, it often results in novel concepts and can be used to adapt cultural models to the rhetorical goals of individual members of the culture.

In the first section below, the framework of conceptual blending theory is briefly introduced, and an example of a rhetorically motivated blend is described.

Because conceptual blending theory is motivated by many of the same concerns as conceptual metaphor theory, and because the two theories share a common heritage in cognitive semantics, the relationship between these two frameworks is explored in the section on **Conceptual blending and conceptual metaphor**. This section highlights the interdependence of the two approaches and points to their differing emphasis on the language system versus particular language utterances. Where conceptual metaphor theory is focused on identifying and explaining systematic correspondence in language use across pairs of cognitive domains, conceptual blending theory is aimed at identifying mappings between cognitive models set up to understand particular utterances. Although the latter are considerably more diverse than entrenched mappings studied in conceptual metaphor theory, it is clear that conventional mappings provide speakers with an infrastructure to support the more dynamic and sometimes less principled mappings that underlie the meanings evoked by particular utterances.

This is especially the case in the examples discussed in the section on **Humorous blends**. In this section, I describe the conceptual blending employed in a number of humorous examples including cartoons and jokes. In spite of their jocular nature, the blends in such examples often deal with serious issues and play an important role in the perpetuation and negotiation of cultural models.

However, the role of conceptual blending in the propagation of cultural models is perhaps nowhere more evident than when speakers attempt to persuade one another to adopt a particular viewpoint or to convince them to act in a particular way. A number of different examples of persuasive texts and discourse are analyzed in the section on **Persuasive absurdity** to reveal the spectacular blends that speakers create. The analyses in this section amplify the point raised above that the creative elaboration and accommodation of cultural models relies heavily on conventionalized mapping and blending schemes. Moreover, they suggest that real persuasion depends on the motivational capacity of the cultural models themselves.

In the concluding section, I touch briefly on an issue that is deeply problematic in cognitive linguistics, as it is in all social sciences. That is the relationship between the meaning of sentences and the meaning of utterances, between the standard default meanings explored by linguists and

the idiosyncratic meanings speakers derive in situated instances of language use, between public, idealized meaning of cultural models and their private meanings for individual culture members.

2. Conceptual blending

Conceptual blending theory offers a general model of meaning construction in which a small set of partially compositional processes operate in analogy, metaphor, counterfactuals, and many other semantic and pragmatic phenomena (Coulson and Oakley 2000, 2006; Fauconnier and Turner 1998, 2002). In this theory, understanding meaning involves the construction of blended cognitive models that include some structure from multiple *input* models, as well as emergent structure that arises through the processes of blending. Discussed at length in Fauconnier and Turner (2002), blending theory describes a set of principles for combining dynamic cognitive models in a network of *mental spaces* (Fauconnier 1994), or partitions of speakers' referential representations.

Mental spaces contain partial representations of the entities and relationships in any given scenario as perceived, imagined, remembered, or otherwise understood by a speaker. Mental spaces (Fauconnier 1994) can be thought of as temporary containers for relevant information about a particular domain. Spaces are structured by *elements* that represent each of the discourse entities, and simple *frames* to represent the relationships that exist between them. Frames are hierarchically structured attribute-value pairs that can either be integrated with perceptual information, or used to activate generic knowledge about people and objects assumed by default. *Cultural models* are a special kind of frame that deals with socially relevant topics. Finally, *mappings* are abstract correspondences between elements and relations in different spaces. For example, in a tale about the life of a butterfly, we might have one mental space to represent a time in the past, and one for the present. We could then posit two elements, **b** in the Past Space, and **b'** in the Present Space. Elements **b** and **b'** would be linked via an identity mapping to represent the fact that they are the same individual. However, the properties of the Past **b** would be those of a caterpillar, while the properties of Present **b'** would be those of a butterfly.

A development of mental space theory, conceptual blending is intended to account for cases in which the content of two or more mental spaces is combined to yield novel inferences. Central to conceptual blending theory is the notion of the *conceptual integration network*, an array of mental

spaces in which the processes of conceptual blending unfold. These networks consist of two or more *input spaces* structured by information from discrete cognitive domains, a *generic space* that contains structure common to the inputs, and a *blended space* that contains selected aspects of structure from each input space along with any emergent structure that arises out of the imaginative processes of blending. The first process is called *composition*, and involves the juxtaposition of information from different spaces; *completion*, as in pattern completion, occurs when part of a cognitive model is activated and results in the activation of the rest of the frame. Finally, *elaboration* is an extended version of completion that results from mental simulation, or various sorts of physical and social interaction with the world as construed with blended concepts.

Blending involves the activation of cognitive models in integration networks, the establishment of partial mappings between models in the network's different spaces, and the projection of conceptual structure from space to space. Take, for example, the blended concept of a "snowflake kid", as described in a BreakPoint Online article, published on a pro-life Christian association's website (Morse 2005). Snowflake kids are children conceived through in vitro fertilization and subsequently implanted in unrelated "adoptive" mothers with the help of organizations such as the Snowflake Frozen Embryo Adoption agency. This agency allows infertile couples the opportunity to be implanted with embryos leftover from fertility clinics, and serves to rebut the case of biologists who advocate the use of such embryos for scientific research. Debate over the legitimacy of research with human embryos is quite fierce in the United States due to a lack of consensus over their moral status.

Table 1. Spaces in the Snowflake Kid blend

Snowflake Space	Past Space	Blended Space	Present Space
Snowflake(s)	Embryo(e)	SnowflakeKid(sk)	Kid(k)
Frozen(s)	Frozen(e)	Frozen(sk)	
Unique(s)	Unique(e)	Unique(sk)	Unique(k)
	Organism(e)	Person(sk)	Person(k)

As described by Coulson and Pascual (2006), the "snowflake kid" concept is a blend with three input spaces, the domain of snowflakes, the past, and the present. Each column in the table below shows the information

represented in a mental space in the integration network for "snowflake kid". Corresponding predicates and arguments are listed in the same row, and a blank cell in the table represents the absence of a mapping (see also Broccias, this volume). The snowflake *s* in the Snowflake Space is linked to the embryo *e* in the Past Space via an analogy mapping, in that both are easily construed as being frozen as well as unique. Further, *e* in the Past Space is linked to the kid *k* in the Present Space by identity. The cognitive model in the blended space derives some of its structure from each of the input spaces.

Part of the rhetorical efficacy of this blend derives from *compression*. Compression is an operation in blending theory by which relationships that obtain between spaces are understood in a single mental model (Fauconnier and Turner 2002). For example, one might use two mental spaces to represent the different properties of an individual at two different points in time, such as that of the caterpillar and butterfly discussed above. Compression is used to construe the situation in a single cognitive model in a blended space. In the snowflake kid blend, for example, the mapping between the embryo *e* in the Past Space and the Kid *k* in the Present Space are compressed in the blend as the two different developmental stages are conflated.

The compression of embryo and child into a single entity in the Blended Space facilitates the application of certain frames that might otherwise be marked due to the ambiguous moral properties of embryos. For example, whereas the personhood of the embryo element in the Past Space is the subject of controversy between two ideological camps, the snowflake kid in the Blended Space is unambiguously a person, having inherited this property from the Present Space. Consequently, the embryo-kid blend affords the possibility of evoking frames (such as murder) whose application in the Past Space is controversial but whose application in the Blended Space is less so due to properties of the embryonic snowflake kid that has inherited from the kid in the Present Space.

Moreover, at least as described on the BreakPoint website, "Snowflake Kid" does not simply exploit the access principle in mental space theory (Fauconnier 1994), whereby an element in one mental space, i.e. the embryo in the Past Space, is described with language indisputably applicable in another, i.e. the kid in the Present Space. A snowflake kid differs from a normal kid in being frozen and in being extremely small. Further, the framing of a snowflake kid differs quite a bit from the scientific treatment of the microscopic embryos used in scientific research. For example,

Morse (2005) describes the embryos as “tiny humans ... stored in liquid nitrogen tanks,” and refers to genetically related frozen embryos as “siblings” who “remain in these frozen orphanages.”

3. Conceptual blending and conceptual metaphor

Conceptual blending theory assumes many of the same claims as conceptual metaphor theory, such as the idea that metaphor is a conceptual as well as a linguistic phenomenon, and that it involves the systematic projection of language, imagery, and inferential structure between domains. The two approaches are largely complementary, with similar assumptions about the relationship between language and conceptualization, but with different emphases and foci (see Grady, Oakley, and Coulson 1999). For example, in contrast to the emphasis on conventional metaphors in conceptual metaphor theory, conceptual blending theory is intended to capture spontaneous, real-time processes that can yield short-lived and novel conceptualizations. Further, blending theory reveals connections between the cognitive underpinnings of metaphor and a variety of other linguistic phenomena handled by mental space theory (conditionals, counterfactuals, metonymy, etc.), making it especially amenable to the characterization of rhetorical discourse.

Fauconnier and Turner (2002) propose that metaphorical utterances are represented in conceptual integration networks in which the source and target domain each structure one input space, the generic space represents abstract commonalities in the inputs, and the blended space inherits structure from its inputs as well as containing emergent structure of its own. Rather than emphasizing the extent to which metaphorical utterances instantiate entrenched mappings between source and target domains, conceptual integration networks only represent those cognitive models that are particularly relevant to the mapping supported by the utterances. While mappings in the integration network require knowledge of conceptual metaphors such as those studied by Lakoff and colleagues (e.g. Lakoff and Johnson 1980), blending theory is best suited for representing the joint influence of input domains and the origin of emergent inferences in particular metaphorical utterances.

One motivation for blending theory is the observation that metaphorical expressions often have novel implications that cannot be traced back to either the source or the target domain. For example, “That surgeon is a butcher,” customarily connotes the surgeon’s incompetence, in spite of the

fact that people neither consider surgeons to be typically incompetent, nor do they consider butchers (qua butchers) as inevitably inept at their craft. In blending theory, appreciating this metaphor involves establishing mappings between elements and relations in the source input of butchery and the target input of surgery. As in conceptual metaphor theory, there is a mapping between surgeon and butcher, patient and dead animal, as well as scalpel and cleaver.

However, blending theory also posits the construction of a blended space in which structures from each of these inputs can be integrated. In this example, the blended space inherits the goals of the surgeon and the means and manner of the butcher (Grady, Oakley, and Coulson 1999). The inference that the surgeon is incompetent arises when these structures are integrated to create a hypothetical agent with both characteristics. Behavior that is perfectly appropriate for a butcher whose goal is to slaughter an animal is appalling for the surgeon operating on a live human being. The absurd, hyperbolic nature of the cognitive model in the blended space does not seem to undermine its inferential utility, and may even enhance it (as argued in the section on Persuasive Absurdities). The table below shows the conceptual integration network for “That surgeon is a butcher.”

Table 2. Mental spaces in Surgeon as Butcher blend

Surgeon Input Space	Blended Space	Butcher Input Space	Generic Space
Surgeon(s)	Surgeon(s/b)	Butcher(b)	Agent
Patient(p)	Patient(p/a)	Animal(a)	Patient
Scalpel(k)	Blade(k/c)	Cleaver(c)	Cutting-Instrument
<i>Goal:</i>	<i>Goal:</i>	<i>Goal:</i>	
Heal Patient	Heal Patient	Kill Animal	
<i>Means:</i>	<i>Means:</i>	<i>Means:</i>	
<i>Precise Cuts</i>	<i>Slashing Cuts</i>	<i>Slashing Cuts</i>	
	<i>Emergent Inference:</i> Incompetent(s/b)		

The fact that the inference of incompetence does not originate in the source domain of butchery is further suggested by the existence of other metaphorical uses of *butcher* – such as describing a military official as *the*

butcher of Srebenica – that recruit structure and imagery from the butchery domain, but do not connote incompetence. Differences in the implications of the butcher metaphor in the domains of medicine and the military highlight the need for an account of their underlying conceptual origin.

Consequently, blending theory can address the meaning construction in metaphoric expressions that do not employ conventionalized mapping schemes. For example, the italicized portion of this excerpt from an interview with philosopher Daniel Dennet involves a metaphorical blend, “There’s not a thing that’s magical about a computer. *One of the most brilliant things about a computer is that there’s nothing up its sleeve.*” (*Edge* 94, November 19, 2001). The input domains here are Computers and Magicians, and the blend involves a hybrid model in which the computer is a magician. However, the connection between these two domains arises purely from the co-text of this example, as there is no conventional COMPUTERS ARE MAGICIANS mapping in English.

Blending can also be used to explain how a number of different kinds of mappings can be combined to explain the meaning of a particular example such as the following (from Grady, Oakley, and Coulson 1999):

With Trent Lott as the Senate Majority Leader, and Gingrich at the helm in the House, the list to the Right could destabilize the entire Ship of State.

This example involves an elaboration of the conventional Nation-as-Ship metaphor in which the Nation’s policies correspond to the ship’s course, leadership corresponds to steering the ship, and policy failures correspond to deviations from the ship’s course. The Nation-as-Ship metaphor is itself structured by the more abstract event structure metaphor described by Lakoff (1993). The source input is the domain of Ships, which projects an image of a ship on the water, as well as the concept of the helm to the blended space. The target input is the domain of 1996 American politics which projects particular elements, including Trent Lott and Gingrich, to the blend where they are integrated with the sailing scenario.

Grady et al.’s example describes the ship listing to the right. However, in the realistic domain of ships, neither the presence of one individual (Trent Lott) nor the beliefs of the helmsman are likely to cause the ship to list. The logic of this metaphoric utterance comes not from the source input, but rather from the target input in which the Senate Majority Leader and the Speaker of the House can affect national policies and the

overall political orientation of government. Further, the standard association between conservatism and the right as against liberalism and the left is clearly not based on the ship model, as it is frequently encountered in other contexts. However, because the scenario in the blend involves spatial motion, the literal notion of rightward movement is integrated with the other structure in the blend to yield a cognitive model of a ship piloted by New Gingrich that lists to the right. This example thus demonstrates that while the linguistic system provides speakers with a set of coherent mappings between the source and target domains, speakers need not maintain this coherence in the models set up during the comprehension of utterances that exploit these conventionalized mappings.

4. Humorous blends

Blending is common in social and political humor and often involves the projection of people into new contexts where the humorist’s point can be clearly illustrated. Humorous examples highlight the human ability to derive meaningful information from partial, non-systematic correspondences in structure, and even to exploit accidental characteristics of input frames. As Freud noted, joking provides a relatively safe arena for expressing aggressive, insulting, or otherwise socially unacceptable utterances. Blending and the cognitive abilities that support it are crucial in this respect by enabling us to frame taboo topics in terms and domains that are not taboo.

For example, a 1997 cartoon by Chip Bok points up a contrast in then-President Bill Clinton’s alleged penchant for dishonesty and that attributed to his 18th century political counterpart George Washington. On the left-hand side of the cartoon, George Washington says, “I cannot tell a lie.” Addressing Washington from the right-hand side of the cartoon, Clinton says, “If everyone’s on record denying it you’ve got no problem.” In some ways, Bok’s cartoon is similar to a blend discussed by Fauconnier and Turner (1996) in which a modern-day philosopher engages in an imagined debate with Immanuel Kant. In the Kant blend, the professor projects Kant into the modern era so that he can get the esteemed German’s reactions to ideas composed after his death.

In Bok’s cartoon, however, both Washington’s and Clinton’s lines were allegedly uttered by the parties in question. Washington’s lines come straight from the historical record, while Clinton’s were attributed to him by his former mistress, Gennifer Flowers. As for Washington, legend has

it that when he was a boy, he chopped down a cherry tree on his father's farm. When Washington's father discovered what had happened, he went, furiously, to his family and demanded to know who had chopped down the tree. Knowing that he would likely receive a spanking for his efforts, Washington stood up and said, "I cannot tell a lie. It was I who chopped down the cherry tree."

On the other hand, Flowers attributed the remark in the right-hand panel of the cartoon to Clinton in her declaration in the Paula Jones harassment suit against him. Worried about whether people would perceive her relationship to then-Governor Clinton as contributing to her successful career in Arkansas state government, Flowers approached him to discuss whether she should admit to their adulterous affair. Flowers' declaration suggests Clinton told her to deny it, and that he said, "If everyone's on record as denying it, you've got no problem."

The composition of the two men's utterances in the blend results in the activation of a conversation frame and provides a context in which George Washington and Bill Clinton can interact. The mere juxtaposition of the two statements points up a contrast between the two presidents: Washington claimed to be incapable of dishonesty, while Bok portrays Clinton as someone all too willing to lie. Moreover, knowledge that Clinton's remark was originally addressed to Gennifer Flowers allows the reader to set up a mapping between Washington in the blend, and Flowers in the Clinton input. This makes Clinton look bad because it reinforces the idea that he's told people to lie in the past, and, further, it suggests that he would attempt to corrupt someone as upstanding as George Washington.

Moreover, it is only in the blend – where Clinton addresses Washington rather than Flowers – that Clinton's remark can evoke a misunderstanding of Washington's cherry tree. While "I cannot tell a lie," was presumably intended to mean that the guilt Washington would experience from lying precluded him from doing so, Clinton's remark suggests a different interpretation. Rather than guilt over lying, Clinton believes Washington fears reprisal for being caught. By offering Washington advice on how to lie without getting caught, in the cartoon Clinton presents himself as someone likely to behave (and likely to have behaved) in accordance with his own advice. Consequently, it prompts retrospective projections to Clinton's input space, framing denials of the real Clinton's misdeeds as fabricated, and further framing him as untrustworthy. Though the cartoon is probably motivated by the disanalogy between George Washington's reputation for honesty and that of Bill Clinton, the interactive frame

set up in the blend provides a context in which unique structure can arise (see Coulson 2003).

Indeed, conceptual blending theory is particularly well-suited for the analysis of persuasive efforts that involve the combination of a number of different kinds of mappings. This is frequently the case in political cartoons which directly represent the contents of a blended space and invite the viewer to unpack it into its inputs. Coulson (2005) describes a cartoon by Blake Carlson that appeared in *The Arizona Republic* in November 2001 – around the time of the American Thanksgiving holiday in which it is customary to have a turkey dinner. In the cartoon, American president George W. Bush stands at the head of a dinner table about to carve a turkey labeled "Afghanistan". Seated at the table are a number of men in turbans with name-cards that read the names of Afghani ethnic groups (e.g. Uzbeks, Tajiks, Pashtuns, Hazara). Carving knife in hand, Bush says "Look, I'm doin' my best here, but there are only two of them. You can't ALL have a drumstick!"

The cartoon presents the viewer with the blend and invites her to unpack the input spaces in the network. The inputs in this case are Thanksgiving dinner and the Taliban overthrow in Afghanistan. Part of understanding this blend involves appreciating the mappings between Dad carving the turkey on Thanksgiving, Bush carving the turkey in the cartoon, and Bush dividing the control of Afghanistan. Children compete over turkey legs in the Thanksgiving input, the Afghans compete over turkey legs in the blended space, and (many more) Afghans compete over control of Afghanistan in the Taliban overthrow input. By having a single Afghani metonymically represent each ethnic group (the Uzbeks, Tajiks, etc.), the cartoonist here employs what Fauconnier and Turner (2002) refer to as compression to human scale². In this way complex sociopolitical struggles over land rights are understood (and potentially misunderstood) by analogy to everyday experience with dinner table disputes.

One interesting facet of blending in political cartoons is that some of the actors in the blend play themselves. While some of the mappings between the blend and the Taliban overthrow space involve analogy mappings (between the turkey and Afghanistan), others involve identity mappings (Bush maps to himself). Presumably, by restricting the need to make an analogical inference to one key concept (in this case, competition over a limited resource) and utilizing identity mappings between the actors in the cartoon and the actors in the political arena (i.e. having Bush carve the turkey in the cartoon), the cartoonist facilitates appreciation of the cartoon. Political cartoons and rhetorically motivated discourse prompt us

to construct blended cognitive models and, in effective cases of rhetoric, desired inferences are analogically projected from blatantly unrealistic blended cognitive models to the real-world target domain.

Coulson (1996) describes a similar phenomenon in blending in the following joke about a computer virus with some decidedly human qualities:

Menendez Brothers Virus: Eliminates your files, takes the disk space they previously occupied, and then claims it was a victim of physical and sexual abuse on the part of the files it erased.

While ostensibly a warning about a computer virus, the rhetorical topic of this joke is the trial of Erik and Lyle Menendez. These two California teenagers confessed to the murder of their parents, and subsequently claimed they were only acting in self-defense against parents who had repeatedly abused them. Here the joke refers to elements in a blended space, in order to project structure to one of its inputs.

The inputs include technical knowledge about real computer viruses, and the social knowledge of the Menendez brothers' murder trial. While the initial structuring of the blended space is quite congruent with knowledge about computer viruses, there is some structure projected from the social input with no sensible counterparts in the technical domain. While viruses often delete files, occupy disk space, and even have colorful names, the suggestion that a computer virus could be the victim of physical and/or sexual abuse is patently absurd. The inference that the virus's claim is ridiculous and false gets transferred back to the source domain where it triggers a similar inference for the Menendez Brothers Virus' social counterparts.

Coulson (1996) shows how blending in this joke results in two sorts of alterations of conceptual structure, one momentary and one which is more sustained. First, there is the momentary conceptual integration that enables us to conceptualize an abused computer virus. Moreover, the joke also highlights how this sort of disposable blended concept can reinforce a controversial construal of the social input space. In this case, the controversy involved the agentive construal of the Menendez brothers as conspiring murderers with a phony excuse. Conceptual integration processes allow speakers to construct bizarre, disposable concepts that in turn promote particular construals of their input domains.

5. Persuasive absurdity

In fact, the conceptual integration of two scenarios into an absurd scenario in a blended space is a common argumentative tactic. Take the example below, from an actual jury deliberation in a high-profile murder case, videotaped and partly broadcast by an American television station:

Juror 7: Barbara Davis [victim] doesn't get to come ... when she turns 72 in that casket she doesn't get to come out of that casket.

Juror 11: Yeah, but there's not a guarantee that technically he'll get out either. [...]

Juror 13: If she has no chance of getting out of the casket why should he have a chance of getting out of jail?

Juror 2: Exactly. (JurDel.B., p. 22)

Coulson and Pascual (2006) argue that, in this blend, the victim's casket is construed as a prison from which there is no possibility of release. The disanalogy between the victim's future and the Hypothetical Future of her murderer at age 72 is used to argue for giving the murderer a life sentence. In this blend, the victim has the animate and intentional properties she had in the Past Space, before the crime occurred. Further, in spite of her death, the victim ages in an analogous fashion to the prisoner. However, unlike the prisoner, when the victim turns 72 she does not "get" to come out of the casket. Thus the middle-aged murder victim is construed in the blend as being 72 years old, and actively desiring to get out of her casket. However, she is unable to do so because she is dead.

Unlike the examples in the previous section, the unreal image evoked by this blend was not presented for embellishment or humorous purposes. On the contrary, the aging corpse in Juror 7's blend was used to argue for the appropriateness of a life sentence for the convicted murderer. In spite of the absurdity of the image in the blend, or indeed perhaps because of it, Juror 7's argument is compelling. Interestingly, the speaker's goal in this example was not to draw attention to the absurdities in the blended space, but rather to the inferences and conceptualizations that emerge from it. That is, the speaker is not attempting to argue for the absurdity of a dead individual becoming older and trying to escape from her coffin on the day her murderer is released from prison. Rather, the intended absurdity is the idea of giving a more severe punishment to the victim than to the man who killed her.

Examining other instances of blends produced by speakers under the demands of real-time conversation suggests the comprehension and production of these blends is supported by extensive appeal to conventional

cultural, linguistic, and situational knowledge. Oakley and Coulson (under review), for example, analyze the creative blend in the following excerpt from a radio interview with Richard Clarke, former White House Coordinator of counter-terrorism for the Clinton Administration and the George W. Bush Administration. Clarke is deeply critical of the George W. Bush Administration's handling of the "war on terrorism," especially their handling of intelligence leading up to the 9/11 terrorist attacks.

there's uh, some... uh dots
 which are meaningless unless you put them together with lots of other dots
 and,
 I understand what he's say=ing.
 But there are some dots that come out screa=ming at you.
 Uh "do something now about me."

Generically, "to connect the dots" means to understand the relationship between apparently isolated bits of information, and "failure to connect the dots" refers to the failure to do so. However, the expression has a particular conventionalized meaning in the context of the 9/11 terrorist attacks on the World Trade Center in New York City and the Pentagon in Washington, DC, and relates to the American government's failure to predict those attacks. One popular explanation of how 19 hijackers were able to outsmart the collective resources of the FBI (Federal Bureau of Investigation), the CIA (Central Intelligence Agency), and the NSA (National Security Agency) is that while a considerable amount of information relevant to the planned attacks was known to various members of these agencies, it was distributed amongst them such that no single agency had enough information to take preventive action. In this context, "failure to connect the dots" refers to the failure by US intelligence agents to understand the relationship between different facts about individuals with links to terrorist groups.

The "connect the dots" blend co-opts the KNOWING IS SEEING metaphor and applies it to the children's game of Connect the Dots by adding a few new mappings. The most important of these is the mapping between dots and information that is quite simple to establish because a unit of information is often construed as a point. The metaphorical significance of the expression "connect the dots" is bolstered by the fact that there is one entrenched meaning of *connect* that suits the game, and another that suits the epistemic domain. Because the percept corresponds to the knowledge in the KNOWING IS SEEING metaphor, connected dots correspond to known relationships between different pieces of information. In the game,

connected dots afford pattern recognition; in the epistemic domain, knowing relationships between different pieces of information allows the inference of new information. Further, because the clarity of the percept maps onto the quality of the knowledge, unconnected dots that yield an unclear percept map onto poor knowledge. Moreover, the unseen pattern in the game maps onto the fact that important information is unknown to the subject of knowing.

The integration network for "connect the dots" involves one input that pertains to the Connect the Dots game, and another that pertains to national security and intelligence. In the blended space, information gleaned by intelligence agents map onto dots on a two-dimensional plane, and the pattern implicit in these dots (structure projected from the Game Space) maps onto terrorist plots in the Intelligence Space. In the blend, it is possible for the intelligence officer to see terrorist activities represented in the dots. The intelligence officer in the blend draws lines between the dots just as the child does in the presentation space. However, while the child sees a pleasing picture in her drawing, the intelligence officer gains a growing understanding of impending terrorist attacks.

In contrast to this culturally supported connect-the-dots blend which is highly coherent and supported by redundant information, Clarke's more creative screaming dots blend is difficult to understand, and especially difficult without supporting context. This difficulty is partially related to the fact that there is no pre-existing domain in which (actual) dots are construed as screaming, and without additional information it is unclear both what conventional mappings could be used to unpack this blend, and what target domain information the screaming dots are meant to evoke.

Oakley and Coulson (under review) speculate that the comprehensibility of this blend in context reflects both its recruitment of an existing blending schema, that of fictive interaction (Pascual 2002), and the way it utilizes a contextually established mapping between dots and intelligence information. Fictive interaction involves the use of frames for the structure of ordinary communicative acts to animate epistemic processes, as for example when a lawyer says that the facts in a case "tell a story". Consequently, knowing that dots map to intelligence information is crucial for understanding the applicability of the fictive interaction schema. Given this information, the manner of interaction conveys a salient inference as the dots in Clarke's blend do not simply speak, they scream. The implication from this screaming dots blend, then, is that the responsible government agencies were ignoring the warning signs.

In fact, the full meaning of Clarke's remarks is not apparent until the succeeding discourse where he points out that the CIA observed a meeting of high-level Al Qaeda operatives where the attendees were assumed to be planning an attack, and that two of these people were known to have entered the United States prior to September 11, 2001. His point is that these facts alone constituted actionable intelligence and thus the analogy to the game of "connect the dots" is not well supported. Because Clarke objects to the very premise of the mappings in the connect-the-dots blend, he explicitly disputes the applicability of the term "connect", recruiting instead the conventionalized fictive interaction blend. While fictive interaction is compatible with Clarke's construal of certain facts as being independently meaningful, it is less compatible with the mapping between facts and dots. Moreover, the impact of additional information about the target domain on the interpretability of the phrase "screaming dots" suggests that what is crucial for the argument is *not* the structure in the blended space, but rather the mappings between blended structures and concepts in the other spaces in the network.

Indeed, analysis of persuasive texts intended to actually change people's behavior ultimately depends on the audience's internalization of the relevant cultural models. For example, Coulson and Oakley (2006) discuss an example of a (real) direct mail advertisement soliciting contributions to a religious organization. The package includes a letter, a prayer page to send with donations, a return envelope for the prayer page, and a purple sealed envelope bearing a message from Jesus Christ. The letter urges its recipient to perform a number of concrete actions in order to show her faith, and be blessed by Jesus. In particular the reader is instructed to:

1. Place the purple sealed envelope under his or her pillow
2. Sleep on this "purple point of contact just like the children of Israel did when God instructed them to do so (Numbers 15:38,39)"
3. Mail back the prayer page with a donation to the Ministry.
4. Open the purple sealed envelope to receive the "purple point of contact blessing."

As one aspect of its persuasive effort, the letter invokes a blend of conceptual structures from cognitive domains associated with organized religion. For example, the letter repeatedly appeals to a metaphoric construal of making a monetary donation as sowing a seed. For example, towards the end of the letter proper, we read:

We believe you are going to sow a seed so God can bless you with a harvest. God said, "Give and it shall be given unto you ..." Luke 6:38. We pray that you will sow \$5.00, \$10.00, \$20.00, or more. Let God lead you. Our prayer is that, by faith, what you sow will start being returned to you before the seventh day of next month, as God sees fit. He knows best how and when to let it begin. Let us pray over this last page and purple sealed word. Let us bow our heads in prayer—shall we?

Comprehension of this passage requires assuming a number of underlying mappings, including sowing a seed and sending a donation, as well as between the harvest and the money that the sender receives in return. Mappings in the network are set up by a conventional metaphoric connection between agriculture and investment, which maps the metamorphosis of a seed into crops for harvest onto the difference between the initial investment and its return. The inputs to the seed-sowing blend thus include one space we might call the Agriculture Space, and another we might call the Material Space. The mapping between the seed and the money is cued explicitly by the statement, "We pray that you will sow \$5.00, \$10.00 ..." in which the object of "sow" is not a type of seed (as in the Agriculture input), but a unit of currency that originates in the Material input. Linguistic prompts also help the reader identify the mapping between the harvest and the monetary returns, in "Our prayer is that, by faith, what you sow will start being returned to you ..." Since the letter writer will presumably sow money, she can expect money to be returned to her.

The structure in the blend differs from conventional conceptions of agriculture in several ways, especially in its recruitment of structure from a third input which we might dub the Spiritual space. For example, on the prayer page, which the reader sends in with her donation, is written, "I am sowing [followed by a list of potential dollar amounts] as my seed unto the Lord, in faith". Thus unlike real seeds, the seed of \$5 is not planted in the earth, and unlike a conventional investment, it has not been used for its purchasing power.

The example here thus involves a prototypical case of conceptual integration in which the blended concept involves partial structure from each of its inputs as well as novel structure of its own. In the context of the blend, the \$5 has some of the properties of conventional money (it can be used to buy things) and some of the properties of a seed (it will undergo a transformation). Further, unlike most agricultural endeavors, the relationship between the initial sowing of the seed and the final harvest is not mediated by farming activity. In contrast to default knowledge about managing investments, the transformation from seed to harvest here occurs

“by faith”. Because it is a seed of faith, the coming harvest depends on receiving a blessing from the Lord. Moreover, receiving the blessing depends on following a particular series of instructions outlined in the letter: mailing in the donation, sleeping on the (enclosed) purple envelope, and opening the purple envelope after sunset on the following day.

Coulson and Oakley (2006) argue that the desired rhetorical effect of this letter depends on the existence of systematic correspondences between the three input spaces displayed in the table. Besides conventional agricultural metaphors for investment (e.g. investments that grow), the letter authors are exploiting conventional agricultural metaphors for spirituality (e.g. spiritual growth). The former play into the reader’s greed, while the latter are reminiscent of the Bible and bolster the legitimacy of the religious organization that mailed the letter.³ The integration of these three domains results in a scenario where the reader can satisfy her greed in a virtuous way. Thus the inputs in this blend are being exploited not only for their inferential possibilities, but also for their sociocultural significance.

Table 3. Input spaces in faith sowing blend

Material Space	Spiritual Space	Agricultural Space
mail \$5	make an offering	sow a seed
sleep on an envelope	commit an act of faith	cultivate a seed
receive money	receive blessing	reap harvest

While the letter clearly establishes the mappings between sending the money, sowing a seed, and making an offering to God, establishing the blend goes further. Without the blend, there is no way that anyone would believe that sending off \$5 could result in financial gain. Similarly, the reader will not carry around the purple envelope or sleep on it unless she believes the action will have the spiritual and/or the monetary results implied in the blend. So, to reiterate, anyone who performs the actions described in the letter will do so because they have adopted the blend where mailing \$5 is sowing a faith seed, sleeping on the envelope is an act of faith, and that the ultimate result of these actions will be a monetary blessing from God. Moreover, the difference between someone who does and someone who does not carry out the instructions has little to do with the mappings (presumably anyone can figure out what one is supposed to do and why), and everything to do with integrating and elaborating the structure in the blend until it becomes a motivating frame.

6. Conclusion

The examples above show how speakers use conceptual blending to integrate concepts with different affective valences, often so that the desired course of action is seen as consistent with their audience’s value system. We have also seen how compression is used to simplify complex causal relationships, both so they can be more readily understood, and so that they can be construed with motivational “human scale” frames. Persuasive discourse in particular demonstrates the fact that our concepts have affective and motivational properties as well as abstract, inferential ones. Moreover, neither is set in stone as speakers frequently employ conceptual blending processes to reconstrue a particular action to alter its inferential, affective, sociocultural, and even spiritual significance.

Be they serious or playful, communicative acts between humans inevitably involve a balancing act between the static, shared set of idealized cultural models and the more dynamic needs of individuals faced with the realities of a social world that is considerably more complex. Because our construals of particular current events derive their social significance from the cultural models they evoke, even humorous framings serve to reinforce the status of those models as interpretive resources, and create social pressure to conform at least somewhat, and in certain restricted circumstances, to the guidelines laid out in those models.

Political jokes and cartoons can thus be seen as part of the larger social negotiation of the proper application of cultural models. By projecting prominent personalities into new contexts, cartoons promote particular construals of events and well-known people. They reinforce the availability of cultural models, and perhaps even police their use. Moreover, in exploiting the fortuitous structure that arises in blended spaces, humorous examples allow us to test the flexibility of our conceptual system, to navigate the space of possible construals, and to explore the radically different social and emotional consequences they can trigger.

However, for all their importance, the frames and cultural models evoked in discourse do not have a deterministic impact on either our behavior or our construals. People construct blends that are likely to be persuasive, given certain assumptions about how frames and cultural models affect behavior. However, the success of such efforts depends on the extent to which the individual accepts the validity of the model both in general and in its particular application. Moreover, people do not respond to each other’s rhetorical efforts reflexively, but rather agentively with attempts to reframe evoked models in ways more consistent with their own rhetorical

goals (see Coulson 2001 for examples). As Shore (1996: 372) writes, “processes by which cultural models are brought to mind are activities of an active, intentional, and opportunistic intelligence, not a passive recording device.”

The difference between blends we act on and those we do not depends as much on the ontology supported by our cultural values and practices as it does on the structural correspondences between the representations in the different domains. For example, the success of rhetorical efforts to reify a blend like sowing a faith seed will depend in a complex way on the character of their appeal to social roles and previously established cultural practices as well as the extent to which the audience has internalized cultural values. While conceptual integration accounts for some of the mental operations necessary to incite action, the roots of action extend beyond the individual’s nervous system as conceptual blends are intimately intertwined with human doings. In this sense the reason of conceptual blending is indeed the slave to the “passion” of deeply felt motivational frames.

We have seen throughout how processes of conceptual blending mediate the exploitation of stable conventional mapping schemes and adapt shared cultural models to the idiosyncratic needs of individuals.

Notes

1. Note that there is no particular theoretical significance to the use of tables as opposed to circles (as in Fauconnier and Turner 2002) to outline conceptual integration networks. They are notational variants. Many people find tables easier to produce and comprehend, however.
2. Conceptual metonymy is a common and theoretically important example of the more general phenomenon of compression (see Fauconnier and Turner 2002). See Barcelona (2003) for a discussion of the role of conceptual metonymy in conceptual blending.
3. Indeed, the New Testament contains several different versions of the parable of the Sower, about a sower who sows seed on a path, rocks, thorns, and good dirt – and only the latter grew into plants that yielded fruit. One of the few parables in the Bible that is actually followed by exegetical notes from Jesus, the parable is typically interpreted as being about Jesus (the Sower), the gospel, or God’s message (the seeds), and the inability and/or unwillingness of many people to understand God’s message. See Wierzbicka (2001: 257–265) for insightful analysis of this parable. Despite the disanalogies between our letter’s appropriation of this metaphor and the parable of the Sower (e.g. Jesus the Sower of God’s message is presumably not a good mapping for the sinner this

solicitation is presumably aimed at), the existence of the cultural model by which a willing person can be dramatically transformed by the power of God is crucial for the success of this blend. Thanks to a reviewer for pointing this out.

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