The Ghost of Anyone's Father

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Ghosts are everywhere. *Ghost* is a concept for which there is no referent, no evidence, anywhere, any place, any time in the entire sweep of human experience, yet one that is vital in many cultures and perhaps in every culture since the Upper Paleolithic Age. Apparently, there is a powerful impulse within human imagination that flows inevitably to this unwarranted fiction. From the ghost of Hamlet's father to the ghost of Banquo, from the ghost of Samuel, conjured by the witch of Endor, to the Heiké ghosts who make poor blind Hôïchi chant their doleful tale, we encounter a concept whose regular place in the landscape of human thought poses a deep scientific riddle. There is no evidence that hyenas or bonobos think of ghosts, but human beings easily imagine ghosts, not only of human beings, but also of hyenas, bonobos, cats, polar bears, wolves, and, for that matter, freight trains and clipper ships. Ghosts exist for us alone. They should not exist at all, but they do. There they are. Why?

The literary critic, conditioned to attend to the special and local features of a text, of an author, or of an audience, is likely to attend to incidental inflections of the concept *ghost*—how one ghost differs from another. Stephen Greenblatt, for example, in *Hamlet in Purgatory*, takes as his goal the analysis of the special nature of one outstanding and idiosyncratic ghost:

> The ghost in *Hamlet* is like none other—not only in Shakespeare but in any literary or historical text that I have ever read. It does not have very many lines—it appears in three scenes and speaks only in two—but it is amazingly disturbing and vivid. I wanted to let the feeling of this vividness wash over me, and I wanted to understand how it was achieved. (p. 4).

Greenblatt delves into "the matter" Shakespeare "was working with and what he did with that matter" (p. 4), appreciating as he goes along a matrix of historically local texts.

But the ghost in *Hamlet* is like every other—not only in Shakespeare but in any literary or historical text that I have ever read. Disanalogies between it and other ghosts operate, like all disanalogies, over an extensive ground of analogical connections. How can the concept *ghost* exist in the first place to be inflected in an epoch or text? What mental operations shape the lines of its existence? How is it achieved? How can it be given nuance?

To answer these questions, we must contemplate as one intelligible and scientifically tractable unit a suite of descent that is brief by the measures of evolutionary biology but alien to literary studies. Somewhere around the Upper Paleolithic Age, forty or fifty or seventy thousand years ago, our ancestors began the most spectacular advance in human history. Before that epoch, we were a negligible group of large mammals. Afterward, we were poised to dominate the world. The archeological record suggests that during this period, our ancestors acquired a cognitively modern human imagination, conferring upon them the ability to invent new concepts and to assemble new and dynamic mental patterns. As a result, human beings developed art, science, culture, refined tool use, language, religion, and an array of concepts like *death of self, soul,* and *ghost*. How shall we account for this eruption?

Gilles Fauconnier and I, in collaboration, have proposed that human beings are endowed with a basic mental operation we call conceptual integration, or "blending." Various species of mammals—dogs, chimpanzees—appear to have the capacity for very rudimentary blending. Presumably, it emerged somewhere in the descent of placental mammals, or earlier.

(Experiments on marsupials and monotremes are accordingly in order.) But in the Upper Paleolithic Age, an apparently small group of human beings finally evolved the strongest and the most advanced level of blending, called "double-scope" blending. The ability to do conceptual integration at this "double-scope" level made it possible for human beings to develop many conceptual products that look superficially quite different: grammar and mathematics, art and religion, ritual and money, watches and jokes, marriage and ghosts.

Conceptual integration is technically complex, with a set of overarching goals, a set of constitutive principles, and a set of governing optimality principles. For technical details, I refer the reader to Turner (1996), Fauconnier and Turner (2002, 1998), Turner and Fauconnier (1999), and the blending website (Turner 1999-), which presents work on blending by researchers in many fields of study focused on human thought and action. Here, I present conceptual integration topically as it operates in Shakespeare and then explain how it conjures the ghost of Hamlet's father.

Triumphant, Antic Death

In *Henry the Sixth, Part One,* Lord Talbot, caught at a terrible military disadvantage on the French field, fails to persuade his son John to flee. John is slain. Lord Talbot accosts Death:

> Triumphant death, smear'd with captivity,
> Young Talbot's valour makes me smile at thee.
> When he perceiv'd me shrink and on my knee,
> His bloody sword he brandish'd over me,
> And like a hungry lion did commence
> Rough deeds of rage and stern impatience;
> But when my angry guardant stood alone,
> Tend'ring my ruin and assail'd of none,

Dizzy-ey'd fury and great rage of heart
Suddenly made him from my side to start
Into the clust'ring battle of the French;
And in that sea of blood my boy did drench
His overmounting spirit; and there died,
My Icarus, my blossom, in his pride.

-*King Henry the Sixth, part one*, Act 4, Scene 7, lines 3-16.

When young Talbot's body is carried to old Talbot, he taunts Death:

Thou antic death, which laugh'st us here to scorn,
Anon, from thy insulting tyranny,
Coupled in bonds of perpetuity,
Two Talbots, winged through the lither sky,
In thy despite shall 'scape mortality.
O, thou, whose wounds become hard-favour'd death,
Speak to thy father ere thou yield thy breath!
Brave death by speaking, whether he will or no;
Imagine him a Frenchman and thy foe.
Poor boy! he smiles, methinks, as who should say,
Had death been French, then death had died to-day.

-*King Henry the Sixth, part one*, Act 4, Scene 7, lines 18-28.

These lines involve cascades of conceptual integration networks. A conceptual integration network is composed of mental spaces, that is, small conceptual arrays that can be activated mentally during thought and action. In a conceptual integration network, structure from at least two contributing or "input" mental spaces is blended selectively into a separate

mental space, called "the blended space," or "the blend" for short. The blend typically develops emergent meaning of its own. Consider the blended space in which Death is French, and so is slain.

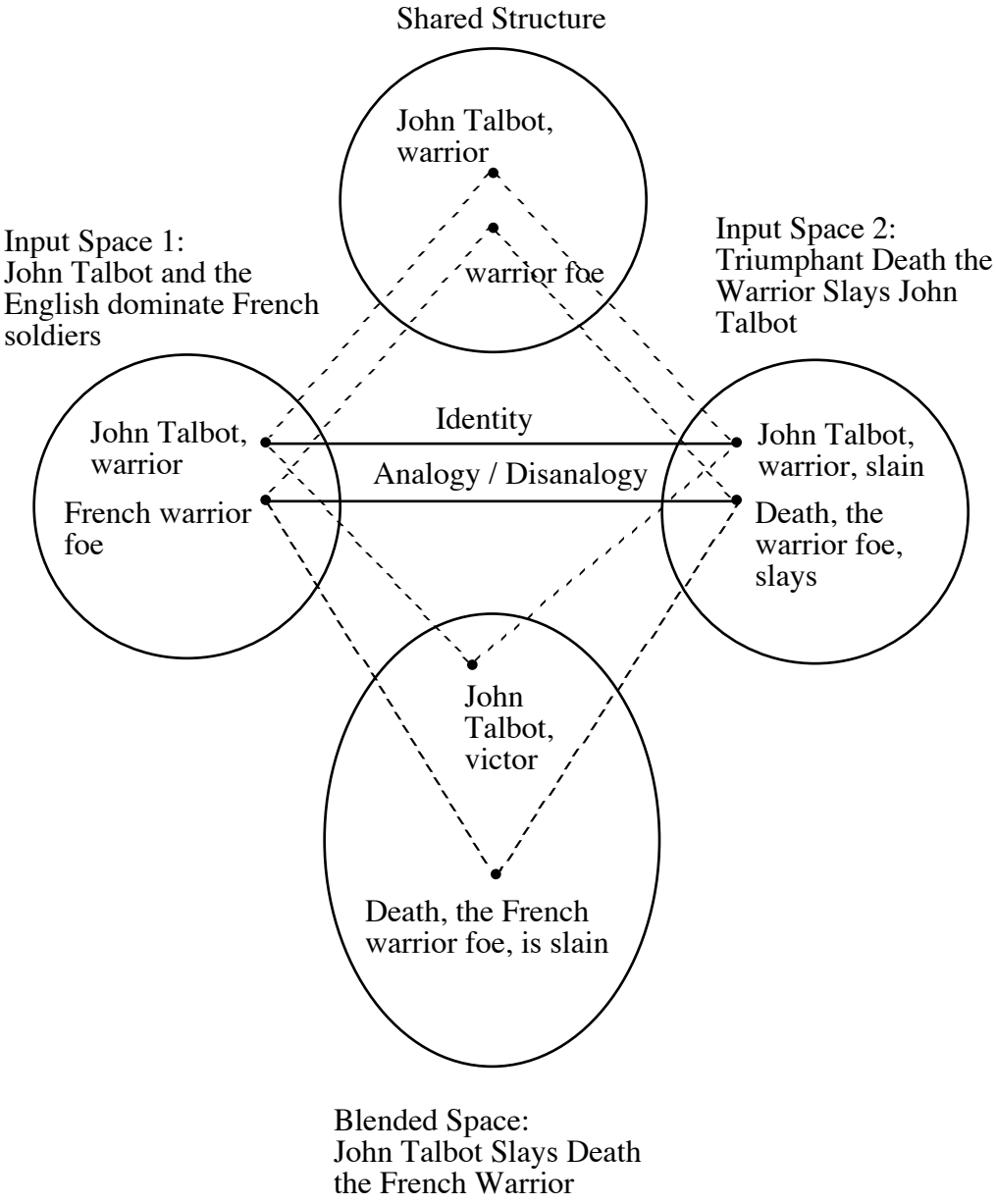

Figure 1: Integration Network — John Talbot Slays Death the French Warrior

In this integration network, the two input spaces and the blended space share the conceptual frame *hand-to-hand martial combat, with victory and defeat*—a powerful and highly familiar conceptual frame, which presents a compressed, vivid scene at human scale.[1] It contains familiar and immediately intelligible force-dynamic structure: two agents place their strength in opposition; they strike each other; one defeats the other. In one of the input mental spaces, Personified Death the Warrior defeats young Talbot. In another input mental space, young Talbot and perhaps other English soldiers furiously attack and dominate French soldiers on the field of battle near Bordeaux on the day of his death. It is easy to draw counterpart connections between the input spaces because both spaces are structured by the *hand-to-hand martial combat* frame, and so the roles in their organizing frames line up. Structure from the input spaces is projected to the blended space, which is also structured by the conceptual frame of *hand-to-hand martial combat*. In the blend, Death the Warrior Foe is now French and so is slain.

This integration network is exotic, pyrotechnic, and Shakespearean, but its power and memorability derive principally from a pattern of blending that we all know and use routinely: the blending of two individual people or of an individual person and a category of people. We can say:

If John were David, he would be married by now.

. . . he would be rich by now.

. . . he would be a stockbroker.

. . . he would use his mobile phone.

Similarly, we can say:

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[1] Conceptual structure that is taken as applying to two input spaces in a network is called a "generic space." When both of them, and therefore their generic space, have the identical organizing conceptual frame, we call the network a "mirror" network. In mirror networks, the shared organizing frame is projected to the blend and perhaps extended there. Mirror networks are extremely powerful conceptual achievements, rich with conceptual connections and compressions. The four-space network whose blended space is *John Talbot Slays Death the French Warrior* is a mirror network.

If John were French, he would have attended the École des Hautes Études en Sciences Sociales.

. . . he would prefer to lecture in English.

. . . he would live in the Lyonnais.

In the first set of expressions, we blend two different individual people. In the second set, we blend a specific person and a category of person, and this is the blending pattern we employ to blend Death the personified warrior foe with the category *French warrior*.

One overarching goal of conceptual integration is to provide global insight. It achieves global insight in part by creating a blend that is compressed and at human scale. Each of the "If John were . . . " sentences prompts us to construct, mentally, a recognizable, compressed human scene in which there is a person—a new person who does not exist inside the input spaces but who, in the blend, has an identity, a character, a history, and habits. The purpose of constructing these blends is to give us insight into John, David, or France.

Crucially, there is *emergent structure* in each of these blends that is not directly available from either input. We can understand and even assent to the first set of assertions regardless of whether *married, wealthy, stockbroker,* or *possesses a mobile phone* can be found in either the *David* input space or the *John* input space. We can assent to each of the statements in the second set even though it is possible to be French without attending the École des Hautes Études en Sciences Sociales, without preferring English, and without living in the Lyonnais, and even if John has never attended college, has never spoken English, and has never lived in France. Conceptual blending develops new meaning out of old. It helps us re-conceive old meaning, even in cases where the blend itself is regarded as false. (Incidentally, blending two people or a person and a category of person is by no means limited to counterfactual blends. We can say, "If John is David, he is rich," in the case where we are wondering whether John and David are the same person, and we can say, "If John is French, he must do his military service," in the case where we are uncertain of John's nationality but suspect that he is French. We can also say it when it has been reported to us reliably that John is in fact French.)

It is the emergent structure in the blend that makes John Talbot victorious over Death. Taken as a whole, the French Death integration network represents John Talbot and the English as glorious, for they have done all that human beings can possibly do. The counterfactual blend informs us that even a slight demotion in Death's status - making him French - suffices to give young Talbot victory over Death, from which we infer exceptionally high valor and power for young Talbot. The meaning carried by the integration network includes the insight that it is not so much the individual French soldiers who have killed young Talbot, but rather Death himself, who escapes defeat on the ground that he is not French.

The French Death integration network manifests central principles of conceptual integration:

–There is a mapping between the input mental spaces. Conceptual integration always involves a mapping between input mental spaces. The mapping typically involves connections of identity, analogy and disanalogy, similarity, causality, change, time, intentionality, space, role, part-whole, or representation. In the French Death integration network, there is an elaborate analogy mapping connecting the shared frames *hand-to-hand military combat*. In this analogy mapping, the role *warrior* in one space maps to the role *warrior* in the other space. There are also identity connectors: the specific warrior John Talbot in one input space corresponds to the identical warrior John Talbot in the other input space. As always with analogy, there is disanalogy: e.g., the French warrior foe is human but Death the warrior foe is immortal.

—There is selective projection from the input spaces to the blended space. Different elements of the input spaces are projected to the blended space. Personified Death is projected from one space, but not his invincibility. John Talbot is projected from both spaces, but not his defeat by Death. The valor of John Talbot against the French is projected, but not the fact that the French in fact killed him.

–Emergent structure. In the blend, we have the most remarkable emergent structure: Death is vanquished, and John Talbot is the victor. John Talbot's ferocity against the French is so strong that if Death becomes French, Death accordingly becomes vulnerable.

Conceptual integration gives human beings superior abilities. In particular, it gives them the ability to perform three characteristic mental feats. Because of conceptual integration, we are able to

—develop new, emergent meaning out of old meaning,

—achieve global insight into very diffuse arrays of meaning,

—and compress diffuse, extended conceptual arrays into much tighter packages of meaning which we can then manipulate mentally with greater ease and facility.

It is a great advantage of conceptual blending that it can create a human-scale, compressed blend useful for grasping arrays of diffuse, extended meaning. It is equally wonderful that it can then use this new blend as a stabilizing, human-scale input to create yet a second human-scale blend. We frequently find in conceptual blending that an existing, conventional blend is used as an input to a new blend. In fact, we see just such a recruitment in the French Death integration network: the input in which Triumphant Death the Warrior Slays John Talbot is of course already the blended space of a familiar blending pattern! It has as one input Triumphant Death the Warrior Slays A Human Being, and as another input John Talbot is Slain by French Warriors.

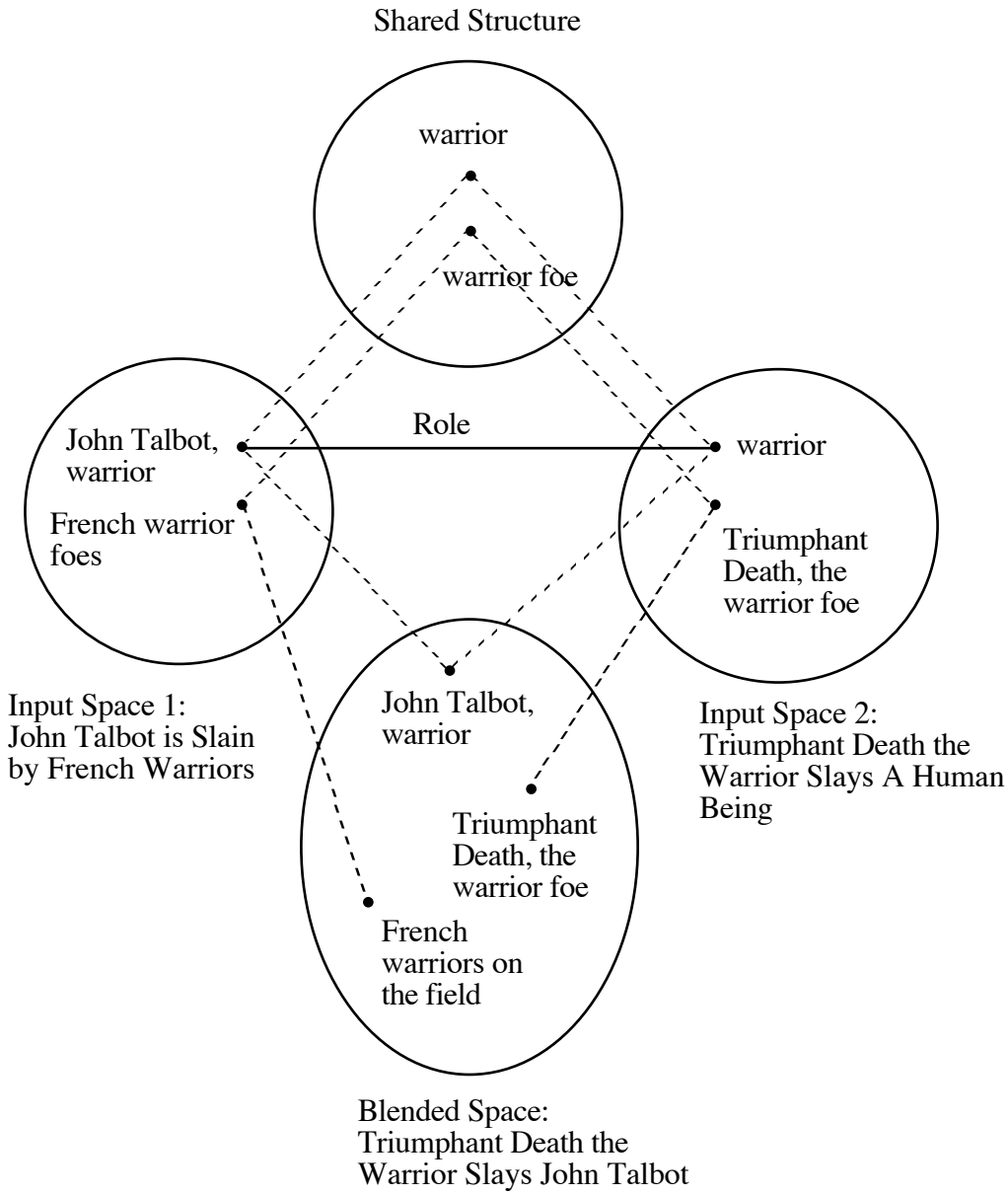

Figure 2: Integration Network — Triumphant Death the Warrior Slays John Talbot

Now let us track this network back one more step. One of its inputs is Triumphant Death the Warrior Slays A Human Being. But that input is already a familiar blend. It has one input space with Personified Death Causes the Event of Dying of Someone Who Resists, and another input space which has martial combat between warriors.

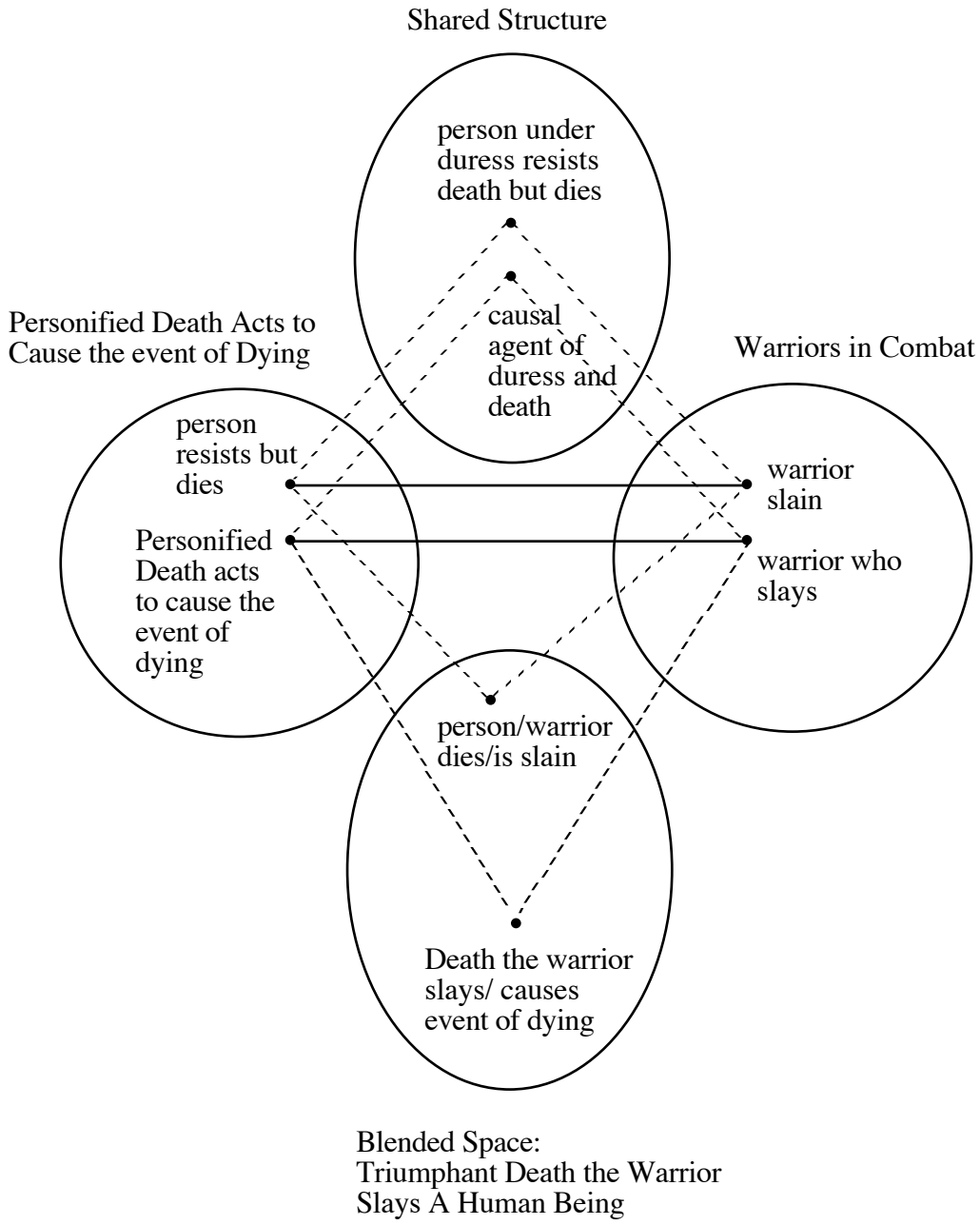

Figure 3: Integration Network — Triumphant Death the Warrior Slays A Human Being

In this network, personified Death in the first input corresponds to one of the warriors in the other input. The person who dies in the first input corresponds to the warrior who dies in the other input. The death of the person in one input corresponds to the death of the warrior in the

other. In the blend, Personified Death is now a warrior foe; dying is the result of being slain in battle; the slaying causes the dying. Projection to the blend is selective: in the input with the two warriors, either warrior might win, and both are mortal, but these conditions are not projected to the blend. There is also emergent structure in the blend: one of the warriors is absolutely invincible.

But this integration network again has a familiar blend as one of its inputs. The personification of Death as the cause of events of dying is a blend of two spaces: dying as a result of mortality and dying as the result of a causal action performed by an agent.

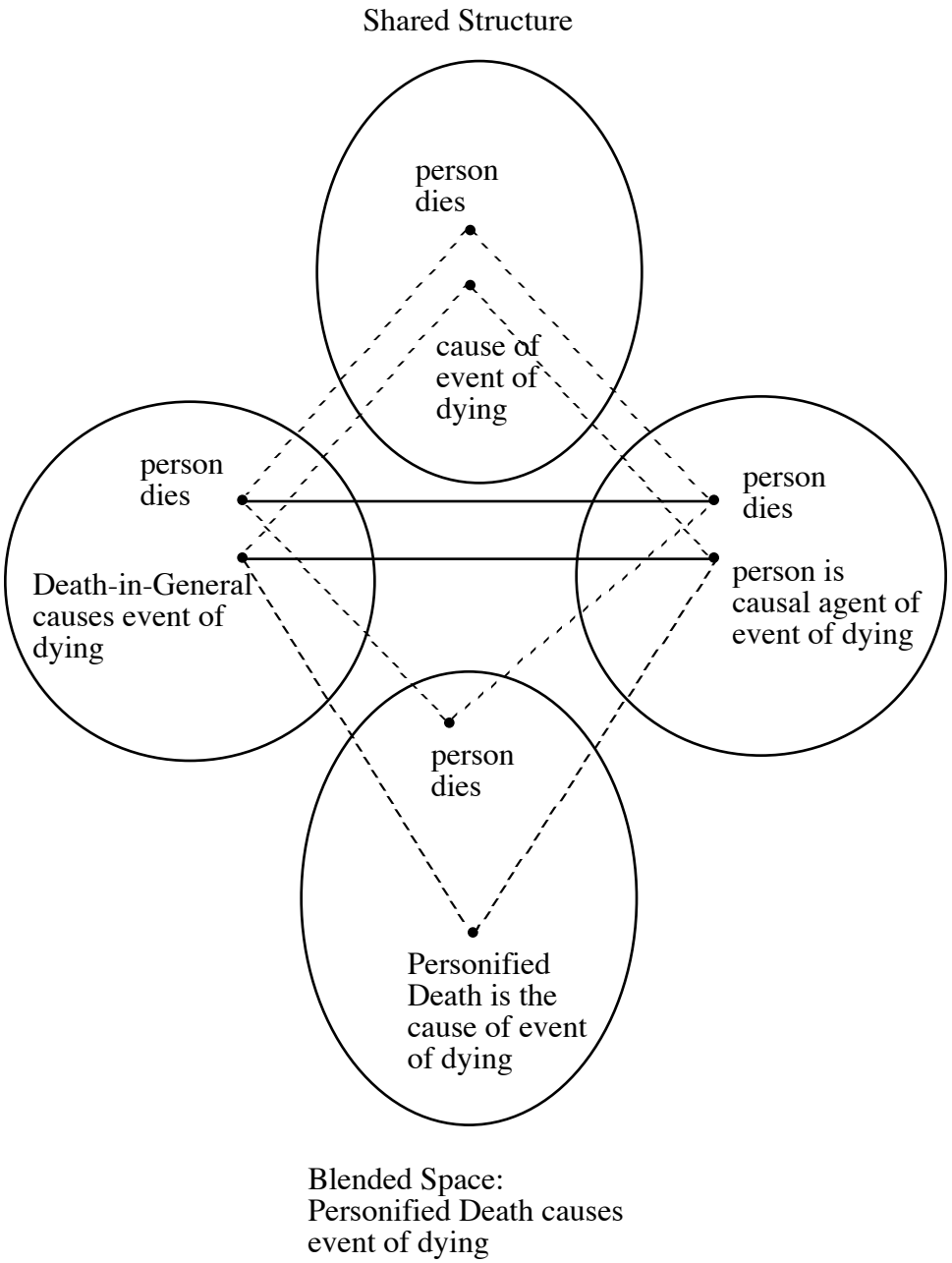

Figure 4: Integration Network — Personified Death Causes An Event Of Dying

In the first input, a person dies and the general cause is Death-in-General, that is, the condition of mortality to which all human beings are subject. In the second input, an agent performs an action that results in someone's death. In the blend, Death-in-general as a general causal force to which all living beings are subject is a personified agent who performs an

intentional action that causes the event of dying. This integration network is an instance of an extremely general blending template according to which an event is understood, in the blend, as the result of an action, and a cause of the event is understood, in the blend, as a causal agent who performs the causal action. (See Turner 1996, page 78 and Turner 1991, page 162.)

It is worth pointing out that this blend is highly "double-scope." A double scope network has inputs with different (and often clashing) organizing frames and an organizing frame for the blend that includes parts of each of those organizing frames and has emergent structure of its own. In such networks, both organizing frames make central contributions to the blend, and their sharp differences offer the possibility of rich clashes. Far from blocking the construction of the network, such clashes offer challenges to the imagination and the resulting blends can turn out to be highly creative. In the network that produces Personified Death as the Cause of the Event of Dying, we have an organizing frame for one input space that requires no causal intentional agent at all: Death-in-General, the condition of mortality, is not a causal intentional agent but rather a general cause. But the other organizing frame is causal action by a causal intentional agent. These two frames differ profoundly in causal, intentional, and interactional structure. Yet we can make conceptual connections between them because they both involve an event of dying, and we can project from both of these input organizing frames to create a new organizing frame for the blend, and so create there a personified causal agent. This is exactly the kind of network that cognitively modern human beings achieve all the time, day in and day out, from infancy onward, often with no apparent strain, but which members of other species appear to find impossible to achieve even when dedicated human beings lend them the most elaborate cultural support possible.

But again, one of the inputs in this Personified Death integration network is already a blend. It has in one of its input spaces Human Death, that is, a specific event of a human being's dying in some manner. In the other input space, we have the familiar causal tautology according to which any element of a class of events is caused by a generic, empty cause: Lust causes all events of lust, Hunger causes all events of hunger, Death causes all events of death. In the blend,

the specific event of dying is caused fundamentally by Death-in-general; the specific manner of death is the means.

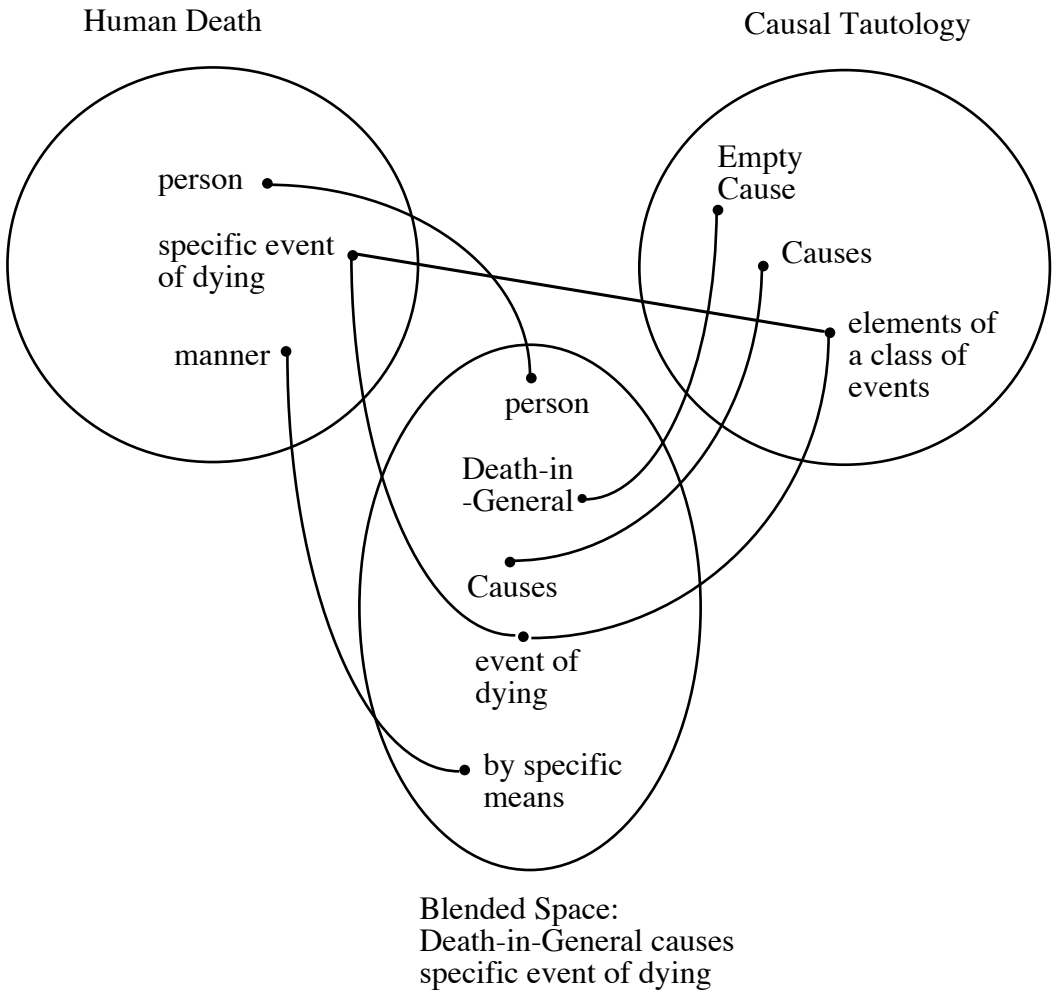

Figure 5: Integration Network — Death-in-General Causes A Specific Event Of Dying

Combining all these blending networks produces an ingenious invention: the defeat of Death the French Warrior, to the glory of the Talbots and the English. This arresting invention depends upon both the basic mental operation of blending and the deployment of particular entrenched templates for building blending networks:

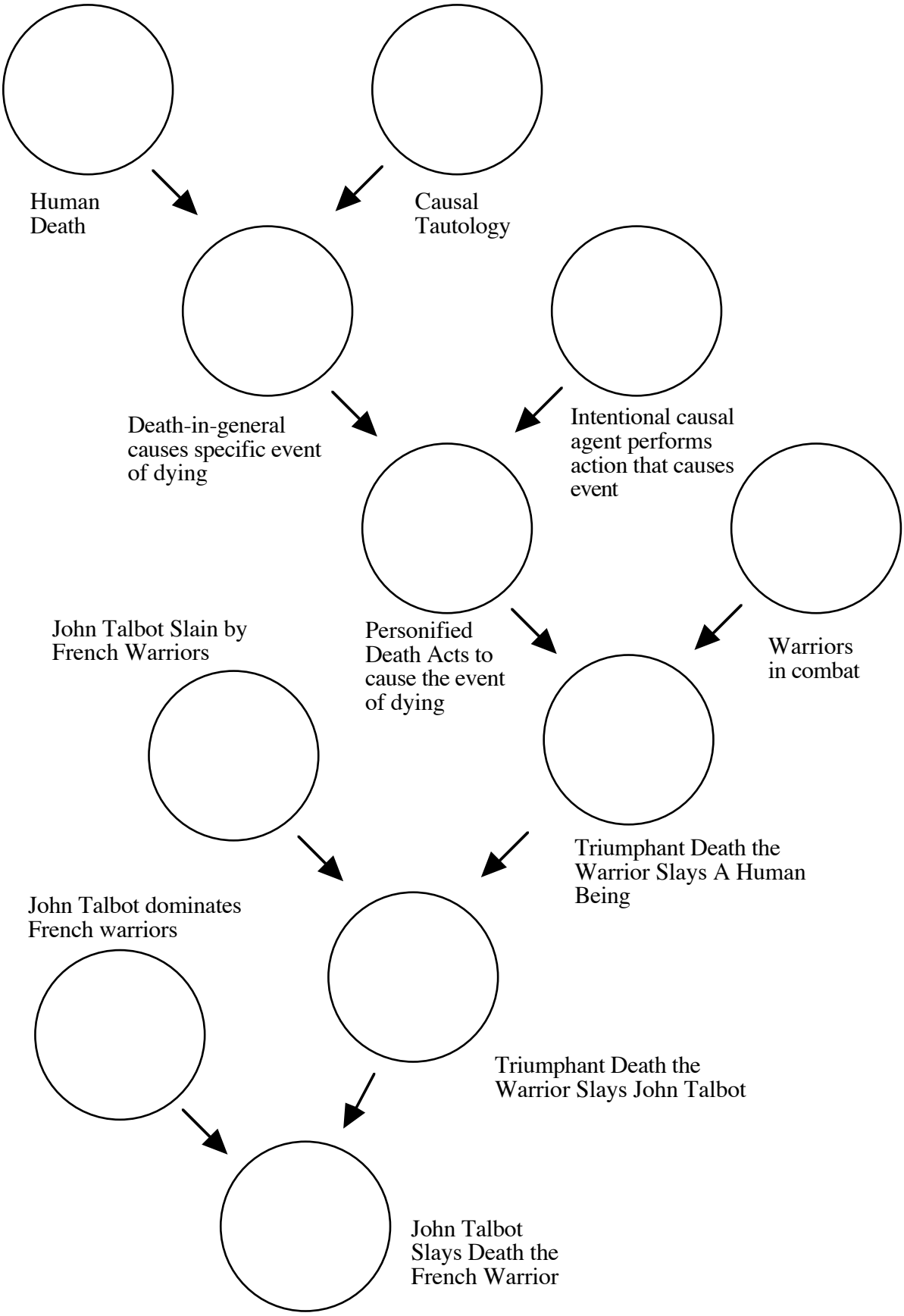
Human
Death
Causal
Tautology
Death-in-general
causes specific event
of dying
Intentional causal
agent performs
action that causes
event
Personified
Death Acts to
cause the event
of dying
Warriors
in combat
John Talbot Slain by
French Warriors
Triumphant Death the
Warrior Slays A Human
Being
John Talbot dominates
French warriors
Triumphant Death the
Warrior Slays John Talbot
John Talbot
Slays Death the
French Warrior

Figure 6: Hyper-Integration Network

I have skipped entirely over all the blends in old Talbot's first address to Death, "Triumphant death, smear'd with captivity . . .", including the personification of death, the blend of young Talbot and a hungry lion, the blend of the two Talbots with Dedalus and Icarus, the blend of young Talbot and a blossom, and the blend of the battle and a sea in which young Talbot is not so much slain as drowned.

I have even left out of my tedious brief diagrams crucial input spaces and compressions lying within the cascading integration network that produces Death the French Warrior. Let us focus on just one of these. The blend in which Triumphant Death the Warrior Slays Human Beings can be used—and often is used—regardless of the specific manner of death. We can say of someone who dies of a heart attack, for example, that "Death struck him dead with a single blow." But in the case of John Talbot, the specific cause of death happens to be martial combat. Therefore, the mental space in which John Talbot dies in battle already carries a conceptual frame that accords with much of the content of other spaces central in the cascading integration network. It is accordingly quite easy to compress *being slain by French warriors* with *being slain by Death the warrior*, to create a single scene in which John Talbot is slain by Death, who is not French, by means of the French warriors who deliver the injuries. In this scene, a lethal blow from a French warrior is equally a lethal blow from Death. This blend can have the effect of stripping the French warriors of any martial glory in defeating John Talbot—they succeeded only because Death himself has taken the field and is complicit in every blow. In the final blend, where Death is a mere Frenchmen, there is no glory to the French at all, but only death for them all around.

Lord Talbot understands that imagined scenes can arouse strong emotions and powerfully shape the way we think and behave. Fervently wanting his son to speak to him before dying, and knowing his son's great motivation to defy the enemy, old Talbot prompts young Talbot to

construct a blend in which Death intends to terminate John and his activity, to shut him down, to silence him. In such a blend, merely speaking becomes an act of defiance and bravery. This blend accordingly allows the son to tap his greatest sources of energy: his will to obey his father, his will to respect his father, and his will to defy the enemy. In the blend, they all motivate him in the same direction. In the blend, for John, to speak at all becomes simultaneously an act of obedience and respect for his father and an act of defiance of their joint enemy.

Talbot recruits other rich input spaces to amplify the blend in which Death is personified and to portray the death of his son as an injustice. In the blend, Death is made antic, scornful, and insulting. The certain power of mortality is blended with the institutional power of the tyrant, thereby making Death a bullying jerk rather than an honorable opponent and so making it immoral that young Talbot has died.

In another feat of blending, the two Talbots deprive their martial enemy of victory: they escape Death and his "insulting tyranny." Their souls' departure for heaven is blended with an act of escape from an enemy. This remarkable success is invented against a reality in which, in fact, young Talbot is dead and old Talbot will die within seconds, in which the corpse of the son is cradled in the arms of the father, in which father and son have been separated for seven years, in which they are now permanently and forever deprived of each other's company:

> Come, come, and lay him in his father's arms.
> My spirit can no longer bear these harms.
> Soldiers, adieu! I have what I would have,
> Now my old arms are young John Talbot's grave. [Dies]
>
> -*King Henry the Sixth, part one*, Act 4, Scene 7, lines 29-32.

But in the blend, they are not merely together but permanently bonded, escaping their powerful joint enemy. Glory of glories, the Talbots are carried on wings through the yielding sky. Unlike Dedalus and Icarus, the Talbots in this final act reach their destination, united. No untoward

calamity, no mistake by the father, causes the boy, on this redemptive occasion, to fall from the sky.

One of the fundamental blending networks that make the "escape from mortality" conceivable is the familiar, entrenched, and productive blend in which a human being has a soul. The concept of a soul is rooted in one of our most familiar conceptual frames, called "Caused Motion." It has highly familiar and human-scale force dynamics. In caused motion, an intentional agent performs an action that causes an object to move in a direction. This frame is so valuable to us that, in addition to lexical items, there are clausal constructions dedicated to expressing blends that involve caused motion. (See Fauconnier & Turner 2002, p. 370-373; Fauconnier & Turner 1996.) The frame of caused motion applies to our own bodies whenever someone bumps, pushes, or pulls us. But we can apply it to our own bodies in another way: it seems to be routine for human beings to create blends in which the intentional agent that causes the body to move is something inside us that is separate from the body: the *soul*. In this blend, our body is the object that is made to move, and the intentional agent who is separate from the body but makes it move is not another person but instead something inside the body. The concept of *soul* is available in the blend.

There are many other conceptual blends available to support or even drive this invention. They can all be recruited into a more complicated integration network to provide projections and motivations. For example, we can be inside clothing or a costume and make it move. This suggests a blend in which the body is a robe. But a robe needs an intentional causal agent inside it in order to lend it human rhythms and human gestures. If, in the blend, the body is the robe, then projecting the wearer of the robe to the blend creates an element that can be the separate, intentional, causal agent inside the body: the soul.

Additionally, since a person appears to have a body that is identical to the body we see after the death of the person, we can make a blend in which the disanalogy connection between the person and the body is compressed to create an *absence* in the blend of the cause of the

movement and the sensation. In this blend, the human body becomes a *corpse*—that is, a *lifeless* human body, a body whose animation is *absent*.

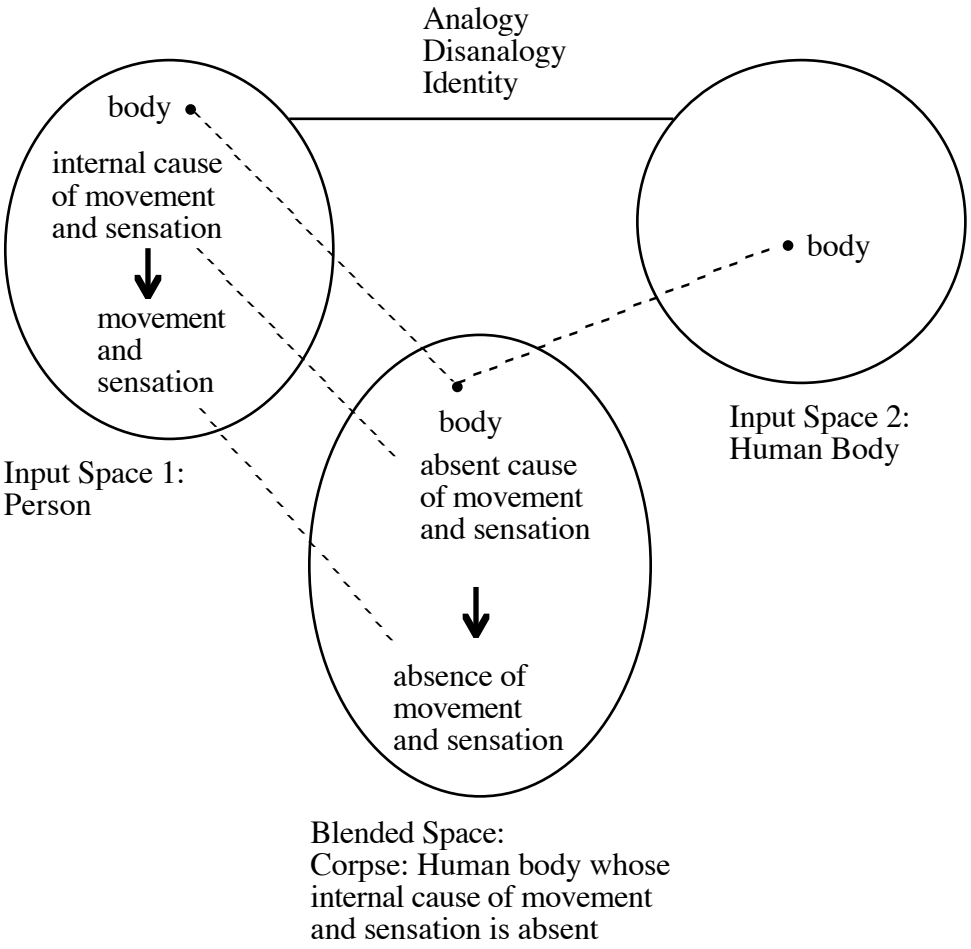

Figure 7: Integration Network —Corpse

In Fauconnier and Turner 2002, we analyze this very general pattern of compressing analogy/disanalogy connections between inputs. The analogy/disanalogy connection is compressed so that the disanalogy part corresponds to a feature of an element in the blend. This feature is *absence*. The element is in the blend, but now has the feature *absent* or *missing*. The resulting blend and the input space in which the element is *present* now stand as counterfactual with respect to each other.

In a larger network in which we incorporate the blends that provide the concept of the *soul* as an intentional and causal agent of movement and sensation who is nonetheless separate from the body, we have a soul that is internal to the person but *absent* from the corpse.

This concept of the soul can moreover be reinforced and elaborated by means of a very general blending template, widely used throughout human cognition, according to which an element that once was present in a location and now is absent from that location is *departed*. In the case of a person or an object, absence is frequently the result of departure. We can use this scene as an input to an in-jest blend and so say, "Now where did those scissors walk off to?" or "Where has my pen hidden itself?" Following this pattern, we can do further blending on the concept of the absent soul to produce the blend in which the soul is not merely absent but now *departed*. The emergent structure in this blend can include the notion that when the soul is absent from the body, it is because it is present somewhere else; that the soul is in a single space-time location; that death is the departure of the soul from the body as it journeys to another place. In the case of the Talbots, it journeys through the sky, presumably to heaven. This notion of departure of the animating element fits nicely with other spaces in the elaborate network: for example, we can get out of the clothes and costume and go to another location, leaving the clothes or costume behind, and when we do, they are without humanesque movement. We depart from inside the clothes or costume, and we go to another place.

There are kindred blends that lend additional support to the concept of the *departed soul*. We know that when we dream we have perceptions that do not fit our surroundings. Often, in our dreams, we are someplace other than the place in which our body is located. Projections to the blend produce, in the case of the sleeper, the concept of a soul that is intentional and sensory, that moves the body according to its intentions, and that can separate from the body without taking away any of its immateriality, exactly because it is immaterial. Being immaterial, it can be lighter than material objects and so float up; it can go in and out of the same body, indeed in and out of different bodies (as in reincarnation and possession); it can be unconstrained by

physical objects and so penetrate walls and ceilings; it can be impervious to material objects and so invulnerable to blows. But now we approach the subject of ghosts.

The ghost of Hamlet's father

Pascal Boyer, a cognitive anthropologist, has argued in both *The Naturalness of Religious Ideas* and *Religion Explained* that human beings inevitably conceive of "non-evidentiary" entities and forces, including ghosts, spirits, demons, and gods, and that these concepts exhibit certain regularities, however various they seem.

The concept *ghost* arises through conceptual integration, partly by compressing crucial vital relations between disparate conceptual elements to create a tightly-organized human-scale scene in the blend in which there is a new element in the blend, one that does not exist as such in the inputs, a *ghost*. The word "ghost" points us not only to such an element in the blend but inseparably to an entire network and its cross-space relations. In one mental space in this network, we have the life, or events from the life, of a person, such as King Hamlet. In a second mental space, there is no such person, but there are memories, dispositions, and conditions connected to the existence of that person in the other mental space. The person in the first mental space has effect in the second mental space, but does not have physical existence or physical effect there.

There is a vital relation of Time between these spaces: the first is temporally prior to the second. Before the onset of the second, the person in the first died. There are strong and complicated vital relations of Analogy and Disanalogy between these spaces. The court of King Claudius is closely analogous to the court of King Hamlet, but there is also the salient disanalogy between them that King Hamlet is in the first mental space but not the second. There are other disanalogies: Gertrude is married to King Hamlet in the first mental space but to King Claudius in the second.

There is a vital relation of Identity between the living person in the first mental space and the corresponding entity that is the topic of the remembering or disposition in the second mental space. The living King Hamlet is "identical" to the object of Hamlet's memory. There are also vital relations of Causality between these spaces: the living person in the first mental space is causal for the remembering in the second, and for similar intentional states there.

The blend receives its relevant temporal moment and spatial location from the second mental space, which does not have the living person. So Act I, Scene I of *Hamlet* has as its temporal location a time four months after the death of King Hamlet ("Nay, 'tis twice two months, my lord"), and, as its spatial location "A platform before the castle" in Elsinore. But the person in the blend is projected from the other space, the one with the living person. So the person in the blend has the form and manner of the living King Hamlet:

> HORATIO
> What art thou that usurp'st this time of night,
> Together with that fair and warlike form
> In which the majesty of buried Denmark
> Did sometimes march?
>
> *Hamlet*, Act 1, Scene 1, lines 46-49.

And again:

> MARCELLUS
> Is it not like the king?
> HORATIO
> As thou art to thyself:
> Such was the very armour he had on

When he the ambitious Norway combated;
So frown'd he once, when, in an angry parle,
He smote the sledded Polacks on the ice.
Hamlet, Act 1, Scene 1, lines 58-63.

The animate being in the blend is also assumed to have much of the knowledge, beliefs, and desires of the living King Hamlet:

HORATIO
Or if thou hast uphoarded in thy life
Extorted treasure in the womb of earth,
For which, they say, you spirits oft walk in death
Hamlet, Act 1, Scene 1, lines 136-138.

This assumption is crucially correct, as the ghost makes clear in its own description of its love, its sorrow, its memory, its judgments, its hopes, and its authority:

GHOST
O Hamlet, what a falling-off was there!
From me, whose love was of that dignity
That it went hand in hand even with the vow
I made to her in marriage, and to decline
Upon a wretch whose natural gifts were poor
To those of mine!
But virtue, as it never will be moved,

Though lewdness court it in a shape of heaven,
So lust, though to a radiant angel link'd,
Will sate itself in a celestial bed,
And prey on garbage. *Hamlet*, Act 1, Scene 5, lines 48-58.

. . .

Thus was I, sleeping, by a brother's hand
Of life, of crown, of queen, at once dispatch'd:
Cut off even in the blossoms of my sin,
Unhousel'd, disappointed, unanel'd,
No reckoning made, but sent to my account
With all my imperfections on my head:
O, horrible! O, horrible! most horrible!
If thou hast nature in thee, bear it not;
Let not the royal bed of Denmark be
A couch for luxury and damned incest.
But, howsoever thou pursuest this act,
Taint not thy mind, nor let thy soul contrive
Against thy mother aught: leave her to heaven
And to those thorns that in her bosom lodge,
To prick and sting her. Fare thee well at once!
The glow-worm shows the matin to be near,
And 'gins to pale his uneffectual fire:
Adieu, adieu! Hamlet, remember me. *Hamlet*, Act 1, Scene 5, lines 75-92.

The disanalogy between the two input mental spaces on the existence of the person is compressed into a set of related properties in the blend: the person in the blend (that is, the ghost)

is incomplete, diminished, or in various respects absent. The fact that the living King Hamlet is not in Hamlet's present means that King Hamlet cannot act directly in the usual fashion in Hamlet's present reality; and this lack of direct effect is projected to the blend, where the ghost cannot take vengeance through direct action. That is why he needs Hamlet. By the same token, the fact that the living cannot interact through normal physics with a person who is not in their reality is projected to the blend to give the ghost special invulnerabilities:

> MARCELLUS
> We do it wrong, being so majestical,
> To offer it the show of violence;
> For it is, as the air, invulnerable,
> And our vain blows malicious mockery.
> *Hamlet*, Act 1, Scene 1, lines 143-146.

Ghost is a category in the blend indicating a special person (or, if you prefer, animate being) who holds a position such as this one in a conceptual integration network. The specific person is a member of the category.

The projections to the blend from the input spaces are selective and not in general predictable, although there are some very common patterns. In the blend, we have a being who has some intentionality projected from the space of the living person, and so typically has some of the living person's memories, interests, and psychological characteristics. The disanalogy between the input spaces having to do with the existence of the person is frequently compressed to the property of insubstantiality in the blend. This insubstantiality frees the ghost, despite its unitary animate form, from standard physics.

This partial freedom from physics can make it possible for ghosts to inherit aspects of what Leonard Talmy (2000) calls "fictive motion." "Fictive motion" is "the extensive representation of nonveridical phenomena - especially forms of motion - both as they are

expressed linguistically and as they are perceived visually." Talmy seeks to account for expressions that depict motion when there is no physical occurrence of motion: *This fence goes from the plateau to the valley; The cliff wall faces toward/away from the island; I looked out past the steeple; The vacuum cleaner is down around behind the clothes-hamper; The scenery rushed past us as we drove along*.

In such cases, one conceptual input to the cognitive representation has no motion but the other has motion. These inputs are integrated into a blended scene of "fictive motion." Such a conceptual scene looks at first blush more complex than its conceptual inputs, but it creates a familiar pattern at human scale involving location, shape, contiguity and motion. Talmy's example, "The mountain range goes all the way from Mexico to Canada," gives us global insight into the location of the mountain range and its spatial relationship to Mexico, Canada, and the United States. It presents a static scene using motion: *goes all the way from . . . to . . . .* Far from being unusual, this is a standard strategy in many and perhaps all languages, as Talmy surveys. Languages systematically and extensively refer to stationary circumstances by means of forms and constructions whose basic reference is to motion. "The mountain range goes all the way from Mexico to Canada" prompts for a cognitive representation in which a relevant dimension of the static object, the horizontal, is now the trajectory of motion, and in which there is now a trajector that moves in time along the trajectory, from Mexico to Canada. The grammatical construction that evokes this cognitive representation normally assigns the trajector to the subject position and the movement to the verb ("Marie goes to the store"). But in this case the construction uses the label for the trajectory in the subject position: "*The mountain range* goes from Mexico to Canada."

The resulting cognitive representation now has a human scale scene in which a trajector moves in a human-scale temporal interval along a human-scale path. Space and time have been scaled down, and a simple, ideal path has been created along which there is motion. Understanding the fictive motion scene in this way allows one to do the correct projection back

to the static input with the mountain range, and to construct the appropriate relevant configurations of the range and the countries.

Talmy provides a taxonomy of sources of motion for fictive motion scenes. The mountain range scene has an input with a trajector moving along a linear path, but another of Talmy's examples, "The field spreads out in all directions from the granary" has a motion input in which a material substance (like oil or wine) distends or diffuses from an initial spot.

The formal integration in fictive motion expressions is particularly noticeable in what Talmy calls "Access Path" expressions, such as "The bakery is across the street from the bank." The static input could be expressed by "The bakery is on the street." The motion input has something departing from one point, traversing some surface, and arriving at another point. The words "across" and "from" come from the motion input. The expression for the fictive motion scene combines grammatical elements from the two inputs, so we can say, "The bakery is *across* the street *from* the bank." The mountain range example and the bakery example have the same motion input. In the bakery example, the motion input has a surface that is traversed. Its counterpart in the static input is the street. In the fictive motion scene, the surface traversed is fused with the street, and we can use the label "the street" to pick out that fused element and we can put "the street" in the grammatical position for the surface traversed ("across *the street*"). Similarly, the endpoints of the trajectory in the motion input have counterparts in the static input: the bank and the bakery. In the fictive motion scene, we fuse the endpoints of the trajectory with their counterparts in the static input, and we can use the labels from the static input ("the bank" and "the bakery") to pick out the fused elements, and place those labels in the grammatical positions for the endpoints. Talmy discusses a range of other categories of fictive motion, involving paths of emanation, orientation, radiation, sensation, pattern, advent, and coextension.

The existence of fictive motion as a basic component of human thought is crucial because ghosts, being animate physical beings, must obey some regular physics, but are unlikely to obey the same physics as living human beings since the disanalogy between the existence of the living person in the past input space and no such existence in the present input space must be

compressed to some property in the blend. Talmy, citing Pascal Boyer, observes that there is indeed is a culturally pervasive and coherent conceptual system of "ghost physics," according to which ghosts obey all the usual causal expectations for physical entities, except for a few strange exceptions. Talmy proposes that the exceptions are explained by "fictive motion":

> The exceptional phenomena found to occur in ghost physics may be the same as certain cognitive phenomena that already exist in other cognitive systems and that then are tapped for service in cultural spirit ascriptions. The linguistic expression of fictive demonstrative paths and its gestural counterpart may well provide the relevant properties.
>
> To consider gesture first, if I, for example, am inside a windowless building and am asked to point toward the next town, I will not, through gesticulations, indicate a path that begins at my finger, leads through the open doorway and out the exit of the building, and finally turns around and moves in the direction of the town. On the contrary, I will simply extend my arm with pointed finger in the direction of the town, regardless of the structure around me. That is, the demonstrative path, effectively conceptualized as an intangible line emerging from the finger, itself has the following crucial properties: (1) It is invisible, and (2) it passes through walls. These are the very same properties that are ascribed to spirits and ghosts. (pages 126-127).

The ghost of Hamlet's father conforms to ghost physics. The ghost shows up here and there, moving from one place to another instantaneously (just as we can indicate in a quick gesture), and vanishing:

> MARCELLUS
> Shall I strike at it with my partisan?

HORATIO

Do, if it will not stand.

BERNARDO

'Tis here!

HORATIO

'Tis here!

MARCELLUS

'Tis gone!

Exit Ghost

Hamlet, Act 1, Scene 1, lines 140-142.

Where are ghosts? How can we interact with them? Various solutions are possible. Typically, because the ghost is lacking in full vitality and activity and so is only just part of the world of the living, it is excluded from those parts of our world where vitality and activity are high. The diminished vitality and activity of the ghost are blended with the conditions of its situations. One therefore encounters ghosts while one is in a dream-state, a trance, or a similar altered state; in sleep or a coma; in a place and time where we do not typically find people engaged in daily activity, that is, in a place and time like a cave, an abandoned dungeon, or the deserted walls of a castle in the middle of a night. Indeed, the disanalogy between the existence of the living person in one space and no such person in the other space can be compressed to produce in the blend a special physics according to which the ghost is *prevented* from inhabiting any canonically vital space in the world of the living:

BERNARDO

It was about to speak, when the cock crew.

HORATIO

And then it started like a guilty thing
Upon a fearful summons. I have heard,
The cock, that is the trumpet to the morn,
Doth with his lofty and shrill-sounding throat
Awake the god of day; and, at his warning,
Whether in sea or fire, in earth or air,
The extravagant and erring spirit hies
To his confine: and of the truth herein
This present object made probation.
MARCELLUS
It faded on the crowing of the cock.
Some say that ever 'gainst that season comes
Wherein our Saviour's birth is celebrated,
The bird of dawning singeth all night long:
And then, they say, no spirit dares stir abroad;
The nights are wholesome; then no planets strike,
No fairy takes, nor witch hath power to charm,
So hallow'd and so gracious is the time.
HORATIO
So have I heard and do in part believe it.
But, look, the morn, in russet mantle clad,
Walks o'er the dew of yon high eastward hill.

Hamlet, Act 1, Scene 1, lines 147-167.

In its existence and in its features, the ghost of Hamlet's father follows conceptual lines that are, for human beings, thoroughly regular and common. This unwarranted, non-evidentiary concept allows us to create an intelligible, familiar, human-scale scene. The meaning with which

Hamlet wrestles, and under whose sway he suffers, is diffuse, unclear, pervasive, unsuited to human understanding. But in the blend, he can inhabit one of the most basic human scenes: he is holding a conversation with his father, who instructs, argues, commands, and pleads, pressing upon Hamlet his duties, explaining to him his situation. This blend is connected to the diffuse realities Hamlet endures. It thereby provides a way of grasping them that is otherwise unavailable.

When we see a ghost, it seems special, an outlier, an exotic being in a wild moment whose spectral power washes over us. The likeness of the ghost to the living person—from its movement to its moan—can produce a marvelous and uncanny sense of vividness, gripping our memory. What makes this conception and reaction possible is the basic mental operation of conceptual integration. Understanding the nature of conceptual integration yields no new reading of *Hamlet*—the purpose of analyzing the blending networks in Hamlet is rather more fundamental, that is, to try to account for why there are imaginative inventions and readings at all, and why we have the ones that we have. The neurophysiologist of vision does not alter how we see or what we see but instead analyzes the operations of the visual mind. Prompting a reader to construct a different "reading" of a familiar text is in many cases a worthy enterprise, but it defers the cognitive question, because we still must account for the mental operations that produce the new reading. For texts as familiar as Shakespeare's, we probably have as many complex meanings as we require in order to attack the question of what makes it possible for the cognitively modern human mind to construct them. The analysis I present gives no new refinement in the methods of traditional literary interpretation. But it explains the origin of the ghost of Hamlet's father.

Coda: Stepping Back

Irony typically involves stepping back from what is in focus to frame it as one possibility in a set of interacting alternatives. In chapter seven of *The Way We Think*, Fauconnier and I

(2002) present an analysis of the way in which an entire blending network can be ironic, standing in relation to another. We write,

> Consider an ad for Toblerone, a chocolate candy that comes in three sizes of pyramid—small, medium, and large. An ad for Toblerone shows the famous Egyptian pyramids of Giza, two of them small, one medium, and one quite large. Much smaller, the ad shows a group of four Toblerone chocolates in the identical configuration. The caption reads "Ancient Tobleronism?" The ad also includes the motto, "Toblerone: Inspires the World." With a wink, it suggests that such a match of shape and proportion between the Giza pyramids and Toblerone chocolates can hardly be an accident. Surely some profound causality connects them! In the blend, Toblerone inspired the world in antiquity to construct these monuments. In the frame for monuments, monuments are built in honor of, and often in the likeness of, great things. Just so, in the blend, the pyramids have been built to honor and resemble Toblerone. The emergent structure here is that Toblerone has been around as long as history and is the great wonder of the world that inspired all the others. (page 136.)

This is an ironic network. The advertisers expect us to see the irony and to assume that they intend it. Our response to the blending network depends upon our recognizing that it is contradicted by a different mental array that has reference.

I am exceptionally grateful to one of the anonymous reviewers of the present essay for prompting me to take a minute to emphasize that this tension between networks is crucial for the passages from *Henry the Sixth, Part One* and *Hamlet*. As the reviewer remarks, it is an important part of blending theory that the blend does not erase its inputs or require us to forget that it is a blend. We feel the pathos of the scene of the dying Talbots because we know that Old Talbot is striving to produce a vision of his heroic son, thus comforting himself, but also fooling himself, or at least managing his emotions. We know that Death is not a dead French solider and that the scene of death dying is a conventional irony. We admire the father's mental acrobatics

but know that it is a trick, whatever symbolic truth it might carry, because the new blend does not replace or erase its origins. Similarly with ghosts, there is a crucial difference between Hamlet's "believing" in the ghost of his father and his believing that his mother has recently remarried. The power of the play depends upon the shiver of doubt that runs through the ghost network. Such ironies and dissonances depend upon our epistemological stances toward blending networks. In each of these cases, the blending network is only one member of a set of conflicting networks.

Of course, we have already seen the power of an ironic network in Donald Freeman's contribution to this year's *Shakespearean International Yearbook*:

> No, when light-winged toys
> Of feathered Cupid seel with wanton dullness
> My speculative and officed instrument,
> That my disports corrupt and taint my business,
> Let housewives make a skillet of my helm....
>
> *Othello*, I.iii.263-7.

Othello steps back to frame as ironic and ridiculous the integration network in which his love for Desdemona distracts him from his duty. He invites his addressees to do the same, and the reader can follow along. In this construction of meaning, there is one mental array that Othello frames as true, and a separate but related array that he proposes as ironic. But the reader can then step yet further back from this entire mental complex, to construct a higher-order blend in which our sense of Othello's psychology receives powerful projections from the details of his ironic invitation. In a dramatic hyper-irony, we can conclude that his lower irony is motivated by his unconscious, suppressed, or hidden fear that he is vulnerable in just the way his ironic blend spells out.

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