

Conceptual blending, somatic marking, and normativity: a case example from ancient Chinese

EDWARD G. SLINGERLAND*

Abstract

One purpose of this article is to support the universalist claims of conceptual blending theory by documenting its application to an ancient Chinese philosophical text, and also to provide illustrations of complex multiple-scope blends constructed over the course of longer dialogues. Another purpose is to supplement existing theories of conceptual blending by suggesting that, in many cases, the primary purpose of achieving human scale is not to help us apprehend a situation, but rather to help us to know how to feel about it. This argument is essentially an attempt to connect the insights of conceptual blending theorists with those of neuroscientists such as Antonio Damasio, who argues for the importance of somatic states and emotional reactions in human value-creation and decision-making.

Keywords: conceptual blending, somatic marking, Antonio Damasio, Chinese philosophy, emotions, normativity.

1. Introduction

The title of Gilles Fauconnier and Mark Turner's latest book, *The Way We Think* (2002), announces the claim to human universality for their theories of conceptual blending, and similar pan-species claims are made by George Lakoff and Mark Johnson in their work on conceptual metaphor (Lakoff and Johnson 1999). One purpose of this article is to begin the long work of supporting these claims by documenting the operation of conceptual metaphor and blending in an ancient Sino-Tibetan language completely unrelated to the modern Indo-European languages that make up the bulk of the source material in cognitive linguistics. A further point, which can only be hinted at here because of space limitations, is to provide some illustrations of what we find when we go

beyond the single-utterance analyses usually offered in cognitive linguistics work and begin to look at extremely complex multiple-scope blends constructed over the course of longer dialogues, as well as how these complex spaces become entrenched in given discourses and therefore available as inputs for further space building. Most importantly, however, I would like to supplement Fauconnier and Turner's account of the purpose of constructing blends. Fauconnier and Turner note that the overarching goal of all conceptual processes, including blending, is to "achieve human scale"—to achieve images that "have direct perception and action in familiar frames that are easily *apprehended* by human beings" (2002: 312; emphasis added).

What I would like to suggest here is that, in many cases, the primary purpose of achieving human scale is not to help us *apprehend* a situation, but rather to help us to know how to *feel* about it.¹ Especially in political and religious discourse—situations where speakers are attempting to influence their listeners' values and decision-making processes—I would like to argue that the achievement of human scale is intended primarily to import normativity to the blend, which is accomplished through the recruitment of human-scale emotional-somatic reactions. This argument is essentially an attempt to connect the insights of conceptual blending theorists with those of neuroscientists who argue for the importance of somatic states and emotional reactions in human value-creation and decision-making. Below I will briefly survey the views of one of the more prominent of these neuroscientists, Antonio Damasio, before illustrating the relevance of his work to the phenomenon of conceptual blending.

2. Somatic marking, normativity, and decision-making

George Lakoff and Mark Johnson have argued that metaphors for morality are based upon images of well-being, often physical well-being (1999: 290–292). A similar point is made by Damasio with his claim that normative judgments arise from "background feelings" of physiological wellness (1994: 159), which have an important evolutionary adaptive value: "achieving survival coincides with the ultimate reduction of unpleasant body states and the attaining of homeostatic ones, i.e., functionally balanced biological states" (1994: 179).² The main thrust of Damasio's most well-known work, *Descartes' Error: Emotion, Reason, and the Human Brain* (1994), is that—*pace* Descartes and the Enlightenment model of the self—these emotionally-derived and often unconscious feelings of "goodness" or "badness" play a crucial role in everyday decision-making. In what Damasio refers to as the Enlightenment "high-reason" view of decision-making, the individual considers all of the options open

to her, performs a cost-benefit analysis of each option,³ and then coolly chooses the rationally optimal option. Damasio argues that this model is implausible simply because there are so *many* options theoretically available at any given moment, and the human mind is not capable of running simultaneous analyses of all of the theoretically possible course of action. Therefore, the body contributes by biasing the reasoning process—often unconsciously⁴—before it even begins:

Imagine that before you apply any kind of cost/benefit analysis to the premises, and before you reason toward the solution of [a] problem, something quite important happens: When the bad outcome connected with a given response option comes to mind, however fleetingly, you experience an unpleasant gut feeling . . . [This “marker”] forces attention on the negative outcome to which a given action may lead, and functions as an automated alarm signal which says: Beware of danger ahead if you choose the option that leads to this outcome. The signal may lead you to reject, immediately, the negative course of action and thus make you choose among other alternatives. The automated signal protects you against future losses, without further ado, and then allows you to choose from among the fewer alternatives. There is still room for using a cost/benefit analysis and proper deductive competence, but only after the automated step drastically reduces the number of options. Somatic markers may not be sufficient for normal human decision-making, since a subsequent process of reasoning and final selection will still take place in many though not all instances. Somatic markers probably increase the accuracy and efficiency of the decision process. Their absence reduces them (1994: 173).

This point is vividly demonstrated by cases described by Damasio where damage to the prefrontal cortex, a center of emotion processing in the brain, severely impairs an individual’s ability to make what most people would consider “rational” decisions. Although the short- and long-term memories and abstract reasoning and mathematical skills of these patients were unimpaired, in real-life decision-making contexts they were appallingly inept, apparently incapable of efficiently choosing between alternate courses of action, taking into account the future consequences of their actions, or accurately prioritizing the relative importance of potential courses of action. Interestingly, when their decision-making processes are examined closely, these patients appear to approach something like the “high reason” ideal: deprived of the biasing function of somatic markers, they seem to attempt to dispassionately consider *all* of the options theoretically open to them, with the result that they become paralyzed by indecision, fritter away their time on unimportant tasks, or simply commit themselves to what appear to outside observers as poorly considered and capriciously selected courses of action.⁵ Revealingly,

despite his almost complete real-life incompetence, the patient referred to as “Eliot” scored quite well on the Standard Issue Moral Judgment Interview—developed by the Kantian moral psychologist Lawrence Kohlberg, and which measures a person’s ability to abstractly reason their way through moral dilemmas and other theoretical problems. This theoretical ability to reason about dilemmas did not, however, translate into an ability to make actual reasonable *decisions*: “at the end of one session, after he had produced an abundant quantity of options for action, all of which were valid and implementable, Eliot smiled, apparently satisfied with his rich imagination, but added, ‘And after all this, I still wouldn’t know what to do!’” (1994: 49). Damasio postulates that this statement, as well as Eliot’s inability to make effective decisions in real-life situations, can be attributed to the fact that “the cold-bloodedness of Eliot’s reasoning prevented him from assigning different values to different options, and made his decision-making landscape hopelessly flat” (1994: 51).

Less dramatically, the theory of somatic marking explains why human beings are often such *bad*—i.e., not rationally ideal—decision-makers, especially when operating in something other than their ancestral environment (see for example, Kahneman and Tversky 1982). Dispassionate calculation makes it clear that we are likely to achieve a much better payoff investing \$20 weekly in some conservative mutual fund rather than using that money to buy lottery tickets, but the reasoning processes of many are (incorrectly, in this case) biased by the powerfully positive somatic marker attached to the image of the multi-million-dollar payoff. Similarly, the powerfully negative image of a jetliner falling in flames from the sky prevents many from making the “rational” decision to fly rather than drive, even though commercial airline travel is demonstrably much safer than automobile travel. While navigating by means of powerful, reasoning-biasing somatic markers must have been adaptive in our dispersed, hunter-gatherer “environment of evolutionary adaptation” (EEA), it sometimes leads us into errors of judgment in the more complex world of settled agricultural societies, especially when modern technology is thrown into the mix. Despite these potential drawbacks, however, somatic marker biasing seems to have played a crucial role in the survival and flourishing of creatures such as ourselves. “All emotions have some kind of regulatory role to play, leading in one way or another to the creation of circumstances advantageous to the organism exhibiting the phenomenon”, Damasio notes. “Emotions are *about* the life of an organism, its body to be precise, and their role is to assist the organism in maintaining life” (1999: 51). This insight into the role of emotion in human reasoning serves as an important corrective to the Enlightenment ideal of

disembodied reason, and resonates with the arguments of philosophers such as Mark Johnson who have argued for a more body-centric account of human cognition, as well as with the emphasis of evolutionary psychologists on the need to understand human cognition in terms of embodied survival and adaptation.⁶

3. Recruitment of normativity through blending

My main argument in this paper is that a primary function of blending is to harness emotions produced by “basic-level” scenarios and recruit them in order to facilitate or influence the direction of decision-making in more complex or abstract scenarios. The manner in which this is accomplished is the projection of somatic images, along with their accompanying somatic markers. Damasio notes that an important feature of human memory is that “when we recall an object . . . we retrieve not just sensory data but also accompanying motor and emotional data. When we recall an object, we recall not just sensory characteristics of an actual object, but the past reactions of the organism to the object” (1999: 161). This means that “virtually every image, actually perceived or recalled, is accompanied by some reaction from the apparatus of emotion” (Damasio 1999: 58). Somatic marking thus works by attaching emotional-normative weight to images. These attachments are probably relatively fixed for organisms such as ourselves—darkness, pollution, and physical debility are always marked with negative emotions and therefore felt as “bad”—and this is what one would expect from evolution: potential ancestors infused with warm, fuzzy feelings at the sight of putrefying meat were quickly taken out of the gene-pool. The ability of the human mind to perform conceptual blending, however, means that these relatively fixed “human scale” visceral reactions can be recruited for a potentially infinite variety of purposes, including the conscious exploitation of somatic markers by skilled rhetoricians in order to advance their own agendas, as I will discuss below. Damasio makes a similar point in observing that, although emotional reactions are fixed, the stimulus that can trigger them is not necessarily fixed; “the range of stimuli that can potentially induce emotions is infinite” (1999: 58).

The need to incorporate the phenomenon of somatic marking into the theory of conceptual blending first occurred to me when considering the classic example of a double-scope blend (a blend in which structure is being imported from both input spaces) described in Fauconnier and Turner (2002: 131–133), that of “digging one’s own financial grave”. Although this might at first glance seem like a simple source to target domain conceptual metaphor (Grave Digging → Financial Decision-Making), they

observe that this cannot be the case: in the metaphor, finishing the digging of one's grave actually causes death, which is not at all a feature of the domain of literal grave digging. What we have in this example of discourse is in fact a conceptual double-scope blend, with elements being projected from both the grave digging and financial decision-making spaces into a third, blended space. Although Fauconnier and Turner do not map the blend, we might represent it as in Figure 1:⁷

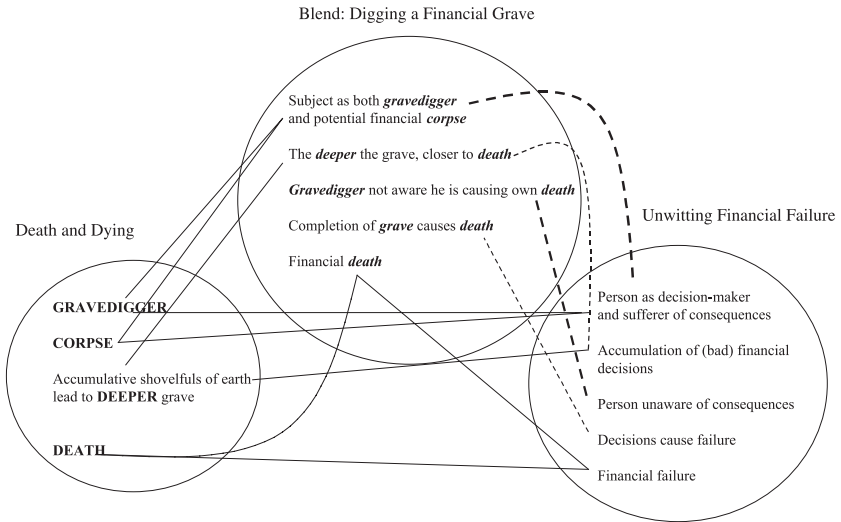


Figure 1. *Digging a financial grave*

In discussing this double-scope blend, Fauconnier and Turner show that many of its important features, such as agency, causality, and intentionality (indicated by dashed lines in the figure), come from input #2 (“Unwitting Financial Failure”). They argue that the point of recruiting input #1 (“Death and Dying”) to the blend is to aid apprehension of the situation by “achieving human scale”—that is, by giving the blend tight compression, such as one type of action vs. many different types of action, a short time-frame vs. extended time-frame, etc.

In considering this blend, however, one might wonder precisely how urgent the need to achieve human scale might be. Although not ideally human scale, the process of financial decision-making is not terribly abstract or complex, and human beings seem perfectly capable of reasoning about it literally. This concern was heightened for me by the fact that, in this blend, all of the relevant *intellectual* decision-making information—

agency, intentionality, causality—is coming from input #2, which makes it puzzling why one would need to involve “grave digging” at all in one’s deliberations. “Grave digging” not only contributes nothing to the abstract structure of the target of the blend (financial decision making), but in many respects (indicated by the heavy dashed lines) is also actively *incompatible* with it in terms of agency, intentionality, and causality. Drawing upon “grave digging” as an input to the blend, despite its potential usefulness in creating a slightly tighter compression, would thus seem at first glance to be profoundly maladaptive if the point is simply better apprehension of the situation.

This is where Damasio’s theory can be so helpful for cognitive linguistics. The apparently clumsy choice of “grave digging” as an input becomes decidedly less so when we think of its recruitment as designed, not to provide tighter structure per se, but rather to import the negative, *visceral* reactions (indicated by the bold type in figure 1) inspired in human beings by graves, corpses, and death, and thereby to bring these *somatic markers* into the blend.⁸ For instance, consider the projection of “accumulated shovelfuls of earth lead to completion of grave” (from input #1) into the blend: each financial decision is now a shovelful of earth, making the financial grave that much deeper, bringing the subject that much closer to financial death. The point, I think, is to get the listener to “live in the blend” by associating the unpleasant visceral connotations of a frightening grave being dug deeper and deeper into the earth with, for instance, each additional purchase she makes of Cisco Systems stock. The author of the blend might even help the imaginative process along by imitating the noise of damp earth accumulating in a pile beside a grave (“thump, thump!”) and pantomiming the movement of a shovel as his friend sits at a computer making these (in the view of the blend-creator, at least) ill-considered purchases with the click of a mouse. The purpose here is not necessarily to help the recipient of the blend to better apprehend the situation intellectually—she presumably already knows that she has lost a lot of money on Cisco, and that the stock price is not likely to recover anytime soon—but rather to help her know how to *feel* about it, to convey a sense of impending doom and thereby goad her into making the decision to immediately cease her current activities. The author of the blend has a very particular normative position to communicate (continued investment in Cisco is *bad*), and attempts to communicate this judgment through the exploitation of powerful, negative somatic marking. If the blend is accepted by the recipient, the choice is clear: no one wants to end up in the grave. This highlights a feature of blends that is not always emphasized: they are not simply normatively neutral devices for accurately apprehending situations, but are in fact often created and

communicated in order to advance particular normative agendas, which they accomplish through the stimulation of predictable visceral reactions.

We can see this even more clearly in another blend discussed by Fauconnier and Turner, that of a senator accused of “snatching food out of the mouths of hungry children” by vetoing an aid bill (2002: 313). They argue that the point of this particular blend is to achieve human scale and help the listener apprehend the situation: the vetoing of the bill and its causal implications are somewhat abstract, long-term and indirect—not at all at a human scale—whereas snatching food from children is an immediately comprehensible scene. Again, though, the point seems to be not so much to allow the listener to understand more clearly, but rather to inspire them to *feel* a certain way: to feel anger, revulsion, and a righteous desire to stop or remedy the situation. The blend thus serves a polemic purpose, communicating a particular normative orientation by recruiting the fairly invariable effects of somatic markers: *any* undamaged human agent will be gripped by revulsion and anger at the sight (or imagined sight) of food being snatched by a powerful, well-fed adult from the mouth of a hungry, helpless child. If we accept the blend, we are then committed to feeling anger and revulsion concerning the senator’s vote. By the same token, supporters of the senator’s policy will dispute the accuracy of the blend, no doubt suggesting alternate framings of the situation—for instance, by vetoing the aid bill, the senator is in fact helping dependent Third World peoples learn how to “stand on their own feet”. I think that this emotive-normative function has been somewhat overlooked in most previous discussions of blending: blends *do* guide reasoning, often in very particular directions chosen by the creators of the blend, but often by means of inspiring normativity-bestowing emotional reactions. This is why blending is arguably *the* primary tool in political and religious-moral debate, where human scale inputs are recruited polemically in order to inspire somatic-emotional normative reactions in the listeners.⁹ Acceptance of the validity of such blends inevitably commits the listener to a certain course of action (or, at least, a *potential* course of action), and this effect can be reliably predicted by the blend author because of the relatively fixed nature of human emotional-somatic reactions.

3.1. *Religious-philosophical argumentation in the Mencius*

Most of the blending and conceptual metaphor work to date has been based upon modern European language materials. What I would like to do below is show blending at work in a 4th c. B.C.E. Chinese text entitled the *Mencius*. This exercise is intended not only to help substantiate the universalist claims of cognitive linguistics by applying its methods to an

ancient, non-Indo-European language, but also to give a hint of the kind of dramatically multiple-scope blends that are constructed over the course of even short selections of discourse.

Separated from Confucius by several generations, Mencius saw himself as being charged with carrying on and defending the Confucian religious vision in a new and largely hostile intellectual milieu. In the book that bears his name,¹⁰ we find him responding to a wide range of questioners and opponents, from neo-Mohists to Primitivist (Daoist) anarchists to cynical rulers interested only in the acquisition of power, wealth, and territory. Mencius has a response to all of these critics of Confucianism, defending the value of traditional Confucian culture as well as the viability of the Confucian project of self-cultivation. Since the selections discussed below portray Mencius in debate with a pair of neo-Mohist thinkers, a bit of background on the Confucian-Mohist debate will be helpful. Mozi, the founder of the Mohist school, believed that much of the suffering in the world was caused by human beings' selfish, partial tendencies—their inclination to favor themselves over others, their family and friends above other people's families and friends, etc. Although he believed these selfish tendencies to be inborn, he also believed that it was possible for humans to be shown logically the value of caring for everyone equally (his doctrine of "impartial caring"), which would then persuade them to abandon their natural selfishness and force themselves to begin acting impartially.¹¹ In contrast to the Mohist position, preferential treatment for family members (especially parents) was one of the hallmarks of Confucian culture, which Mencius was very much interested in defending. In the Confucian view, preferential love for one's family is not only a part of human beings' natural inclinations, but also normatively positive—the basis, for instance, of filial piety, the most fundamental of Confucian virtues. Moreover, the Confucians were skeptical about the strong "voluntaristic" aspect of Mohist education. That is, they believed that any sort of sustainable ethical action had to arise from cultured dispositions, and that mere cognitive assent was insufficient motivation for human beings to radically go against their natural tendencies. To put this disagreement in terms of the debate about "where one gets it" (that is, a sense of morality) that will be explored below, the Confucians believed that one had to get it from trained emotional-rational dispositions rather than from rational doctrines.

4. "One root" vs. "two roots": *Mencius* 3:A:5

With this background in place, we will begin by examining the famously cryptic *Mencius* 3:A:5, which finds Mencius indirectly debating with the

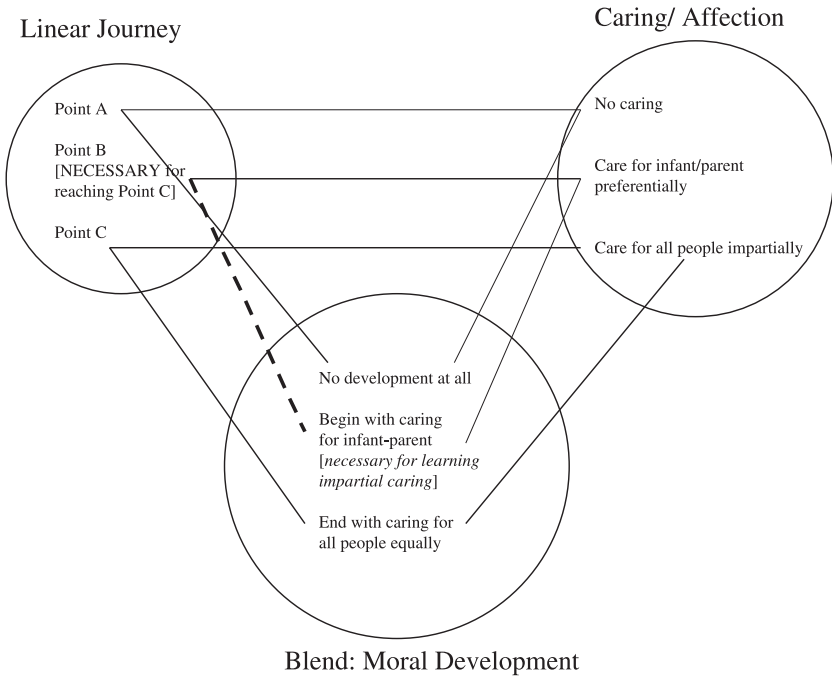


Figure 2. Mencius 3:A:5: *Yizhi's blend*

neo-Mohist Yi Zhi through an interlocutor. Mencius begins by criticizing Yi Zhi for giving his parents a lavish burial, which seems to violate the Mohist imperative of frugality and equal treatment for all. This criticism is repeated to Yi Zhi, who replies, “When the Confucians say, ‘The ancients [cared for the people] as if they were caring for an infant, what is the point of this teaching? I think it means that there should be no gradations in caring, although in applying it one must begin with one’s parents.’” We might map his response as indicated in Figure 2.

Here is where we see the particular twist to Mohist doctrines introduced by the neo-Mohists. Mozi himself was what we might characterize as an extreme voluntarist: he believed that, having been convinced of the desirability of impartial caring, a person could immediately force him or herself to begin practicing it right away. In his response to Mencius, on the other hand, Yi Zhi defends his obviously partial treatment of his own parents by invoking a more gradualist spatial metaphor. This LINEAR JOURNEY space, familiar from our movements through physical space, sets up a generic line with three points: a beginning (point A), a midpoint (point B), and an endpoint (point C). Yi Zhi maps these three points

in physical space onto three stages in the process of self-cultivation: an implied “beginning” stage (where presumably one exhibits no caring for anyone at all), a midpoint (where one is able to care for one’s parents preferentially), and a desired endpoint of completely impartial caring. Yi Zhi’s purpose in constructing this blend is to import from the LINEAR JOURNEY space the logic that it is impossible to get to point C without passing through point B: in other words, one must learn to care properly (if partially) for one’s parents before one can learn to care for others. The primary conceptual work being accomplished in the blend is indicated by the heavy dashed line: preferential care for one’s infant or parent, which is evaluatively neutral in the input space (it is, in itself, neither positive or negative), becomes a necessary precondition of attaining the positive goal of impartial caring. Just as it would be foolish and impossible to try to get to point C without passing through point B on a physical journey, it is as equally foolish to condemn Yi Zhi for being at “point B” in his process of moral education. Yi Zhi thereby defends his lavishness with his parents’ funeral by conceding that, while not at point C (the ultimate goal), he is at least “on the way”, and certainly “farther along” in the process of moral education than point A (no “progress” at all).

Mencius, however, is not at all impressed with this argument, and counters as follows:

Does Yi Zhi genuinely think that a person loves his brother’s son no more than his neighbor’s infant? . . . When Heaven gives birth to [living] things, it causes them to have a single root (*yiben* 一本); Yi Zhi is mistaken because he believes them to have two roots (*erben* 二本).

Presumably in previous ages there were once cultures where the people did not bury their parents—when their parents died, the sons just picked up the bodies and tossed them into drainage ditches. Subsequently, though, when they passed by the ditches and noticed the foxes feeding on and the flies swarming over the corpses, sweat would break out on their foreheads and they would turn away, unable to bear the sight. The sweat was not [an outward show put on] for other people—it was a case of that which was in their hearts welling up (*da* 達) and manifesting itself in their countenance. Presumably they were eventually moved to return home for shovels and baskets in order to bury the remains. If this primitive burial really was the right thing to do, then the burying of parents by filial sons and benevolent men must similarly have its justification.

This is apparently a devastating comeback, because when it is conveyed to Yi Zhi he reportedly becomes pale with embarrassment and humbly concedes, “I have taken his point”.

What, though, *is* Mencius’s point? This has been the subject of some debate in the commentarial tradition, but with a bit of background

knowledge we can make a plausible guess. Other neo-Mohist writings make it apparent that the motive force moving the student along Yi Zhi's three-point continuum was seen as varying depending upon the stage. Getting from point A to point B was seen as the result of fairly natural, "internal" developmental forces: all human beings eventually come to love and care for their parents as they mature. The move from point B to point C is more tricky, however—human beings are not naturally inclined to move "beyond" point B. In order to push them past this point, some "outside" force is required: in this case, the doctrine of impartial caring. This metaphor of "natural" behavior as arising from some internal essence and "unnatural" or "forced" behavior coming from the "outside" (a container schema coupled with the idea of living things having an "essence") was as deeply entrenched in the minds of 4th century B.C.E. Chinese as it is in modern Westerners,¹² and will be invoked several times below. The perceived need to undergo a two-stage process is presumably the point of the saying quoted by Yi Zhi in his response, "the ancients [cared for the people] as if they were caring for an infant". That is, the ancient kings first learned to care for their own infants (a natural development), and then forced themselves to extend this caring to the common people because they understood the importance of impartial caring. As we will see below in the debate with another neo-Mohist, Gaozi, this position was sometimes formulated using a craft metaphor: human beings' innate tendency to learn to care for relatives is a kind of "raw material" that is then shaped by the "tool" of the doctrine of impartial caring.

It is this reliance upon two forces—an internal tendency subsequently harnessed by an external teaching—that is presumably the referent of Mencius's claim that Yi Zhi's theory of moral education has "two roots". We can map his response, which will culminate in a fairly complex multiple-scope blend, in a series of preliminary steps.

5. Step 1

Does Yi Zhi genuinely think that a person loves his brother's son no more than his neighbor's infant?... When Heaven gives birth to [living] things, it causes them to have a single root; Yi Zhi is mistaken because he believes them to have two roots.

Early Chinese conceptions of causality are most generically represented by a SOURCE-PATH schema. Hence the early Chinese word *you* 由 (the visual graph for which might easily double as a diagram of the SOURCE-PATH schema) refers both to the physical origin of a journey and the cause of some effect. This skeletal schema is, however, usually fleshed

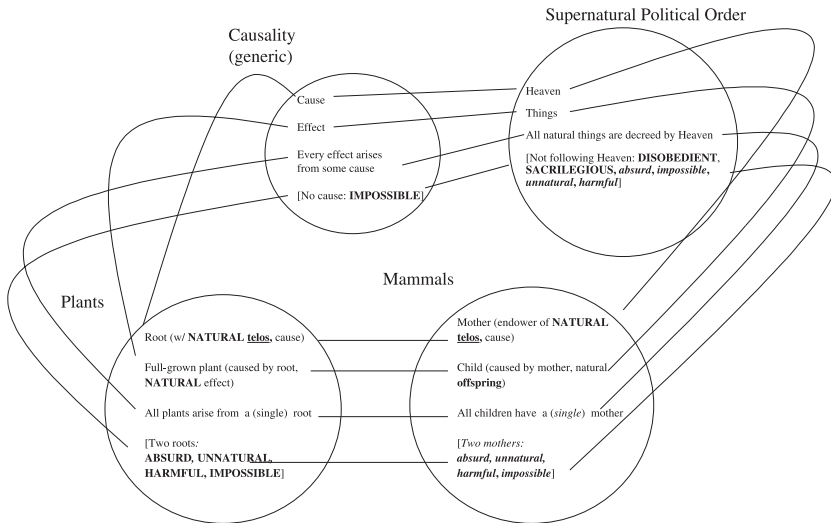


Figure 3. Mencius 3:A:5 (response blend, step 1)

out and extended by imagistically richer schemas. We see this happening in Step 1 of Mencius’s response, with the explicit invocation of two input spaces, that of MAMMALIAN BIOLOGY (as in “Heaven giving ‘birth’ to things”) and PLANT BIOLOGY (“one vs. two roots”). Both of these organic metaphors assume the bare SOURCE-PATH schema (depicted in Figure 3 as the generic “causality” space), but also go beyond it in introducing the idea of a natural *telos*: mammals and plants (the “effects”) grow in a fashion that is somehow—how precisely was always unclear before the discovery of DNA—pre-determined by the qualities of their parents. When Heaven “gives birth” to something, then, it endows that thing with some sort of Heavenly-derived *telos*. The root-plant metaphor is a particular favorite of Mencius’s, but it appears throughout early Chinese texts, which is not surprising in a society dominated by agricultural activities. Normativity is implicitly introduced by both of these spaces because of the fact that the Chinese were quite comfortable with what modern Western philosophers call the “naturalist fallacy”: in their view, that which is “natural” is, by definition, “good”.¹³ The image of a root growing naturally into a full-grown plant or offspring going into adults was, for the early Chinese as well as ourselves, attached to a powerfully positive somatic marker, in that survival and economic success are dependent upon the process of natural fruition. In the same way, the image of a plant with “two roots” (or, by implication, an offspring with two mothers) invokes a strong negative reaction, striking us as unnatural, absurd, and impossible.

The idea of trying to “give” a plant two roots then comes across as not only foolhardy but potentially harmful, involving as it does going against natural tendencies.

This normative slant is also reinforced by background assumptions embodied in the implicitly invoked SUPERNATURAL POLITICAL ORDER space. This space itself represents a very common and deeply entrenched blend (not mapped in the diagram) whereby the relationship between Heaven (*tian* 天) and the myriad living things of the world is conceived of in terms of a ruler’s relationship to his political subjects. The original graph for *tian* seems to depict a large person striding across the sky (like the English “Heaven” or German *Himmel*, *tian* also refers to the physical sky), and from the very beginning of the written record in China *tian* is portrayed as issuing commands and sending down mandates. In *Mencius* 3:A:5 the word translated as “cause” (*shi* 使) in “causes them to have a single root” triggers this entrenched blend, having a root meaning of sending a political subordinate off on a mission. By definition, anything called into being by Heaven is endowed with a positive normative marking—compare the modern Western invocation of “God-given” rights or other qualities—and the natural is identical to the good, in part because that which is natural is that which is decreed by Heaven. Going against the natural is thus not only foolhardy, but is an act of sacrilegious disobedience, which adds two more negative normative qualities to our growing blend. It is worth noting how the SUPERNATURAL POLITICAL ORDER space acquires new qualities by being brought into this network, even implicitly. Political-religious disobedience, while reprehensible, is at least physically possible in the source domain; in the blend, it is seen as being as perverse, physically impossible, absurd, and as baleful as a plant with two roots. This sort of blending of political orders—supernatural or otherwise—with the natural order of things is a very common and powerful strategy in the legitimization of religious and social regimes.

6. Step 2

Presumably in previous ages there were once cultures where the people did not bury their parents—when their parents died, the sons merely picked up the bodies and tossed them into drainage ditches. Subsequently, though, when they passed by the ditches and noticed the foxes feeding on and the flies swarming over the corpses, sweat would break out on their foreheads and they would turn away, unable to bear the sight. The sweat was not [an outward show put on] for other people—it was a case of that which was inside their hearts welling up (*da* 達) and manifesting itself in their countenance. Presumably they were eventually moved to return home for shovels and baskets in order to bury the remains.

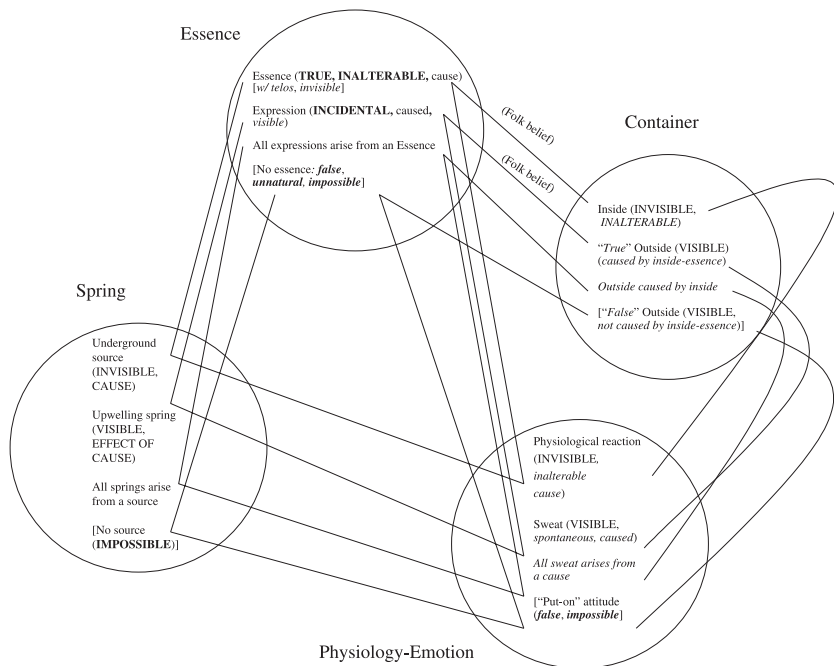


Figure 4. Mencius 3:A:5 (response, step 2)

The description in this section of sweat breaking out on the foreheads of the sons, a result of sincere feelings welling up from the inside (*zhong* 中) of the heart, triggers the creation of several new spaces. To begin with, let us consider both the CONTAINER space (explicitly triggered by the word “inside”) and the ESSENCE space (an implicit folk belief). As mentioned above, a common belief in early China and the modern West—and a good candidate for being a universal human belief—is that all living things possess an internal “essence” that is a causal determinate of their “natural” behavior. Container logic (projected from the CONTAINER space onto the ESSENCE space) dictates that this essence, being “internal”, is not directly observable, but that its qualities can be inferred from the “external” behavior that it “causes”. Conversely, the CONTAINER space also acquires new qualities as a result of projection from the ESSENCE space. When it comes to literal containers, there is no direct, essential relationship between the inside and outside; although the shape or nature of a container may give us a hint as to its contents, it would not make sense to speak of the outside of a container as being “true” or “false”. As a

result of projection from the ESSENCE space, however, the pressure of the blending network forces this quality on CONTAINER space, creating a dichotomy between a “true” outside (which accurately reflects the inside) and a “false” outside (which does not reflect the inside). These acquired characteristics are then exported from the CONTAINER space to topologically analogous portions of neighboring spaces. This possibility of the outside of a container being “false” leads in the early Chinese context, as well as our own, to a general suspicion of the “superficial”, which can be faked, and a corresponding belief that it is what is “inside” that is genuinely important and revealing.

In the case of the bereaved sons, the internal essence giving rise to an external behavior is described in terms of the SPRING schema, where a hidden, underground source (*yuan* 原) naturally gives rise to a visible spring. In classical Chinese the word *yuan* 原 means both a physical source and an abstract cause or reason.¹⁴ The hidden nature of the source and visible nature of its resulting spring correspond to the hidden essence and visible expression found in the ESSENCE + CONTAINER schemas, which both invites and reinforces projections from this space. The word *da* 達 often literally refers to the “welling up” of a spring through the ground, and its mention by Mencius in 3:A:5 (“the sweat was not [an outward show put on] for other people—it was a case of that which was in their hearts welling up and manifesting itself in their countenance”) draws upon the human PHYSIOLOGY-EMOTION space and links it directly to the SPRING and ESSENCE + CONTAINER schemas. Just as a visible spring must issue from some invisible source underground, so the sweat running down the sons’ faces must issue from some internal cause—the additional visual analogy between sweat and a stream of water serves to make this mapping even stronger and more vivid, and is typical of Mencius’s rhetorical skill. It is also a remarkable testament to Mencius’s rhetorical skill that all of these spaces can be recruited into the blend in such a way that they reinforce each other, lend each other entailments, and flesh each other out in such a satisfying manner.

7. Step 3: final blend

If this primitive burial really was the right thing to do, then the burying of parents by filial sons and benevolent men must similarly have its justification.

Here Mencius concludes his argument by explicitly signaling the ultimate target domain of the blend he has been constructing up to this point: the foundations of moral behavior. We can give a sense of the complexity of

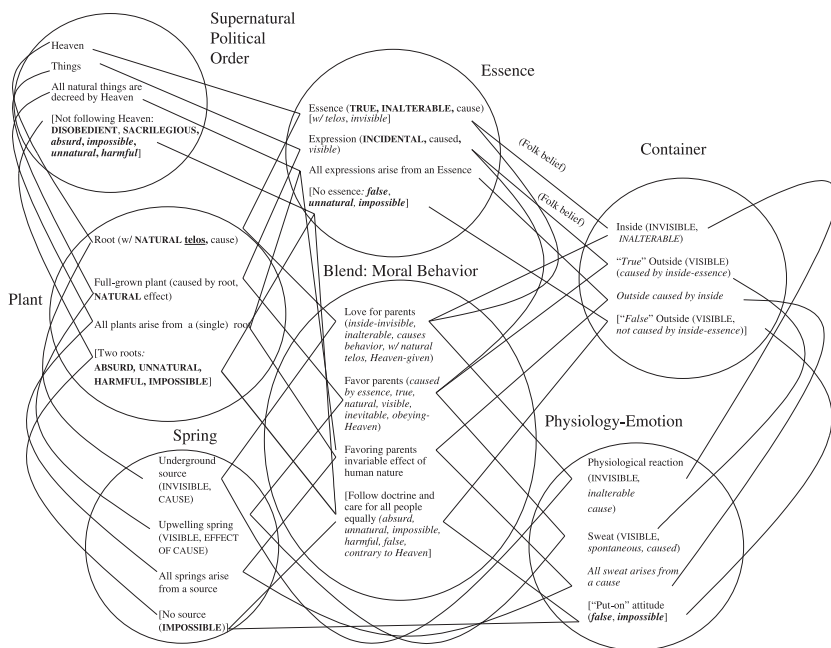


Figure 5. Mencius 3:A:5 (response, final blend)

the blend at this point in Figure 5, although several spaces have to be dropped for the sake of legibility.

By Mencius’s time the combination of the ESSENTIAL SELF + SELF AS CONTAINER schemas¹⁵ had become embedded in the metaphor “so-of-itself” or “natural” (*ziran* 自然). Meaning literally “so-out-of-itself,” *ziran* refers to the way a thing is when it follows its own internal essence. Metaphorically, the image evoked by the term *ziran* is of actions emerging “naturally” out of the container of the self—an example of the NATURAL CAUSATION IS MOTION OUT (e.g., “The chaos in Eastern Europe emerged from the end of the Cold War”) metaphor noted by Lakoff and Johnson (1999: 214) in their discussion of events and causes. This metaphor is simply an extension of the CONTAINER + ESSENCE schemas: that is, the end of the Cold War, for instance, is being conceptualized as a container with an internal essence (chaos) that then emerges in the way a plant emerges from a seed or a child from the womb. Arguably, this NATURAL CAUSATION IS MOTION OUT metaphor arises from our experience with mammalian birth and the germination of seeds, all of which involve literal containers and perceived essences. The naturalistic bias of the early Chinese

gives this concept of naturalness a strongly positive normative flavor, which Mencius is eager to recruit in defending the Confucian cause.

In creating the blend sketched out in Figure 5, Mencius has set us up to perceive accordance with the funeral rituals of the Confucian tradition—and, by metonymic extension, the Confucian moral education system founded upon accordance to such rituals—as an inevitable, “so-of-itself” part of the furniture of the universe. The cause of the sons’ sweating is the feeling of shame and horror inspired by the sight of one’s parents’ exposed corpses, and this reaction is as natural and inevitable as springs flowing from a source, plants growing up from their roots, offspring emerging from their mothers, and loyal subjects following the dictates of their lord. Teaching at a time when Confucianism was under attack from the primitivist school of Daoism for being “unnatural” and hypocritical, Mencius is famous for turning this argument on its head, arguing instead that the ritual training and study of the classics offered by the Confucians in fact represented nothing more than the natural extension of human innate tendencies. Here, of course, is the ultimate point of Mencius’s response: the neo-Mohist goal of trying to subvert these natural tendencies by “adding a root”—i.e., forcing external teachings about “impartial caring” onto a nature that tends toward role-specific favoritism—is thus obviously an absurd endeavor, bound to fail, an affront to Heaven and a perversion of the natural order. This is no doubt why Yi Zhi “turns pale” in embarrassment when the errors of his ways are pointed out by the obliging Mencius. The “obviousness” of this normative judgment obscures the fact that the framing invoked by the blend is by no means predetermined: the sons’ emotion could just as readily have been portrayed as a primitive reflex that needed to be overcome. With the blend set up as it is, however, we cannot but perceive the son’s reactions—and their subsequent partial actions toward their parents—as natural, inevitable, and *right*, and the effortlessness with which we are led to this conclusion belies the skill that went into the construction of the blend.

7.1. *Force vs. natural growth: Mencius 6:A:1 and 6:A:2*

Of course, the “two root” characterization of the neo-Mohist educational scheme is pure Mencian polemics: the image of a plant with two roots is so absurd and unnatural on the face of it that it would never be invoked by someone sympathetic to the position. We will therefore now turn to a consideration of the metaphors that are adopted by the neo-Mohists themselves to characterize their educational project, those of CRAFT REFORMATION and CHANNELING, as well as Mencius’s response to these metaphors.

Book Six of the *Mencius* opens with a famous set of debates between Mencius and a neo-Mohist named Gaozi on the topic of human nature, which has obvious relevance to the issue of how to teach people to be moral. 6:A:1 begins with Gaozi’s opening claim that “human nature is like the *qi* 杞 willow. Morality is like cups and bowls. To make morality out of human nature is like making cups and bowls out of the willow tree”. This statement sets up a double-scope blend that can be mapped as below:

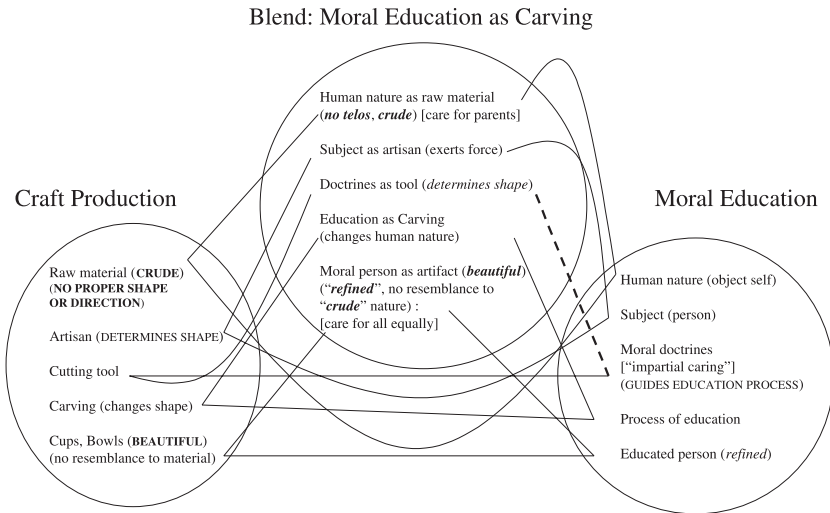


Figure 6. *Mencius 6:A:1 (Gaozi’s metaphor)*

This blend is much more imagistically rich than Yi Zhi’s spare LINEAR PROGRESSION schema considered above. Here, human beings’ partial caring for their parents is portrayed as a raw material (corresponding to point B in Yi Zhi’s schema) that is fundamentally re-shaped by the “tool” of the doctrine of impartial caring. The result is a beautiful artifact (Yi Zhi’s point C) bearing little resemblance to the original, crude material, the shape of which is determined by the doctrine-tool. While most of the structure of this blend is imported from the CRAFT PRODUCTION space, it is double-scope because one important aspect of the causality (indicated by the heavy dashed line) is derived from the MORAL EDUCATION space: although in craft production it is the artisan who determines the shape of the product (wielding the tool in accordance with his or her design), the behavior-determining importance of the doctrine of impartial caring prevails in the blend, resulting in a situation where it is the tool, rather than

the artisan, that determines the shape of the “moral artifact”. Gaozi’s primary purpose in constructing this blend is to get his listener to take the positive feelings one has toward beautiful, finely carved artifacts—as well as the corresponding negative feelings toward crude, unshaped raw material—and project these onto the project of neo-Mohist moral education. The inborn human feeling of partial love for one’s parents is ugly and crude, whereas impartial caring toward all is beautiful and refined.

Mencius’s response is as follows: “Can you follow (*shun* 順; lit. “flow with”) the nature of the willow in making your cups and bowls? Or is it in fact the case that you will have to mutilate (*qiang’zei* 戕賊) the willow before you can make it into cups and bowls? If you have to mutilate the willow to make it into cups and bowls, must you then also mutilate people to make them moral? Misleading the people of the world into bringing disaster upon morality—surely this describes the effects of your doctrine!” This is a classic example of conceptual blending jujitsu: Mencius takes Gaozi’s blend and then sets up two new spaces to counteract it, that of LIVING THINGS and WATER. We can map this modified blend as in Figure 7 below:

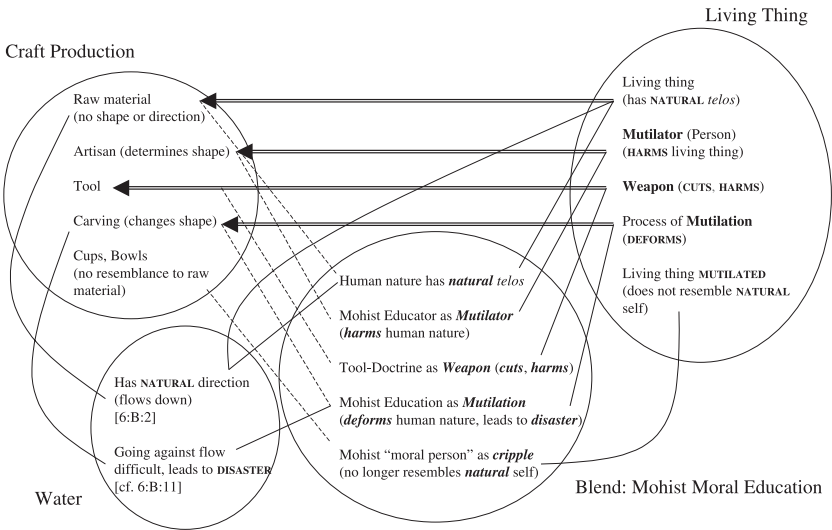


Figure 7. Mencius 6:A:1 (*Mencius’s response*)

The introduction of these two new spaces has a dramatic effect upon the blend. The LIVING THING space as Mencius constructs it maps quite nicely onto the CRAFT PRODUCTION space, but in an entirely *disanalogous* fashion (represented by the large arrows). The shapeless raw material is now compared to a living thing with an innate *telos*, which, in turn,

transforms the skillful artisan of Gaozi's blend into a cruel mutilator, his useful tool into a harmful weapon, and the process of carving into a act of unnatural deformation. Mencius is no doubt counting upon the negative visceral reactions inspired by these images of cutting into a living being, causing it pain, and inflicting mutilation. In this way, he very effectively subverts Gaozi's blend by transforming the original projections from the CRAFT PRODUCTION to Blend space (dashed lines) into normatively strongly negative ones: the product of the neo-Mohist process of education is now portrayed as a tortured moral cripple rather than a skillfully-formed artifact. For good measure, he adds the WATER space to the blend, which both reinforces the negative connotations of going against the natural "flow" and sets up the transition to 6:A:2. The WATER and LIVING THING spaces are constantly invoked in tandem in the *Mencius*, often blended together over the course of a single sentence. This is not only because the two spaces (at least as set up by Mencius) are topologically similar and reinforce each other's entailments, but also because early Chinese medical beliefs about vital essence—*qi* 氣, a sort of invisible energetic force animating living things, typically conceived of in liquid terms—encouraged a direct connection between water imagery and human physiology (as we also saw above in 3:A:5).

Mencius 6:A:2 finds Gaozi picking up on Mencius's water imagery and attempting to turn it to his own rhetorical advantage, switching to the domain of irrigation management to make the neo-Mohist point: "Human nature is like a whirlpool. Cut a channel to the east and it will flow east; cut a channel to the west and will flow west. The lack of a tendency toward good or bad in human nature is just like water's lack of a preference for east or west." If we assume the entrenched metaphor, TYPE OF BEHAVIOR AS DIRECTION, Gaozi's statement here can be mapped as a rather straightforward single-scope blend, as in Figure 8.

With his craft metaphor of 6:A:1 foiled by Mencius's introduction of the LIVING THING and WATER spaces, Gaozi attempts to make a similar point by switching to a different domain, that of WATER MANAGEMENT. The normative point here is also the same as in 6:A:1: just as crude raw material needs to be shaped by a craftsman in order to become beautiful, directionless whirling water in an irrigation pond needs to be directed by a wise manager if it is to be brought to the proper place.

As in 6:A:1, Mencius responds by subverting Gaozi's metaphor:

Water certainly does not distinguish between East or West, but does it fail to distinguish between up and down? The goodness of human nature is like the downhill movement of water—there is no person who is not good, just as there is no water that does not flow downward.

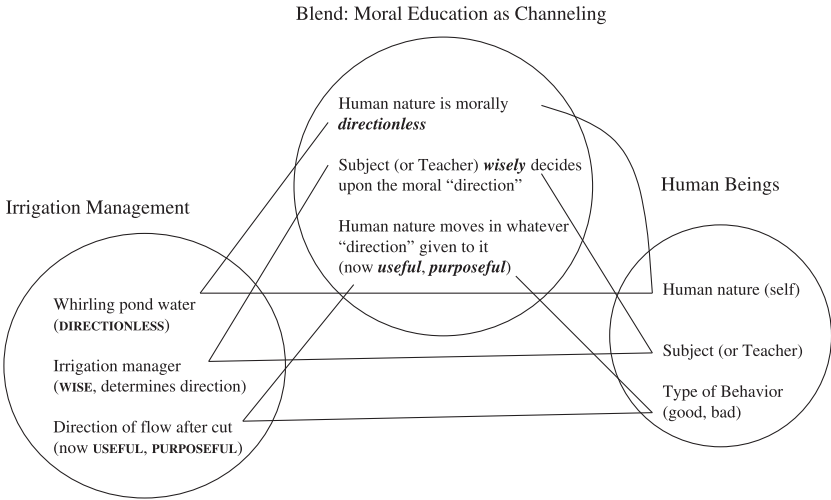


Figure 8. Mencius 6:A:2 (*Gaozi's metaphor*)

Now, as for water, if you strike it with your hand and cause it to splash up, you can make it go above your forehead; if you apply force and pump it, you can make it go uphill. Is this really the nature of water, though? No, it is merely the result of environmental influences. That a person can be made bad shows that his nature can also be altered like this.

Here Mencius subverts Gaozi's blend not by adding new spaces, but by mapping elements of the existing spaces that Gaozi “missed”: water certainly has no preference for East or West, but it certainly has a natural preference for traveling downhill. We can map Mencius's response as in Figure 9 below.

This mapping is simplified by not including the entrenched CONTAINER and ESSENCE metaphors, discussed above and triggered by the mention of “environmental influences” (*shi* 勢), whereby external, environmental causes are understood as “unnatural”, and natural behavior (behavior in accordance with the Essence) is the result of inner causality.

Mencius's response here nicely shows how deciding the relevant features of an input is a very arguable process—focusing on new elements can give an entirely different quality to the blend. Instead of focusing on a whirling pool's potential to be channeled in whatever direction is determined by the irrigation manager, Mencius uses the WATER space to introduce teleological and normatively charged features: the natural, “internal” tendency of water is to flow downhill, and to go against this tendency requires the application of external force. Although it is possible

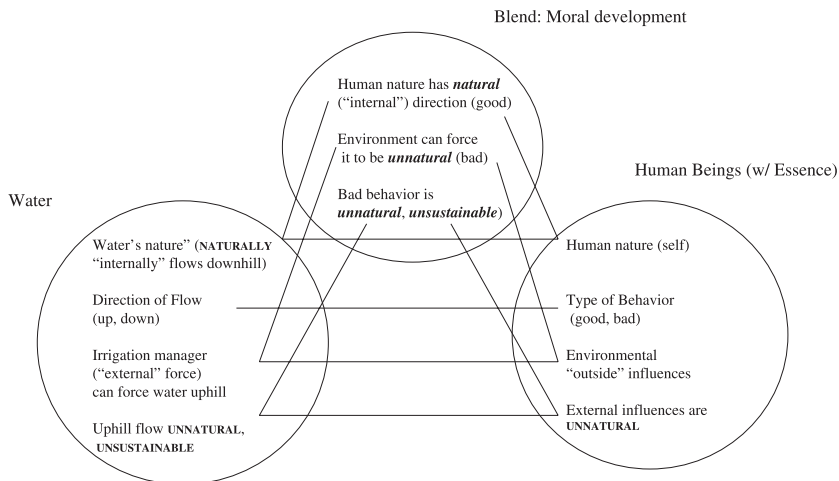


Figure 9. Mencius 6:A:2 (*Mencius's response*)

under certain circumstances to make water flow uphill, this requires a huge expenditure of force and is ultimately unsustainable—going “against the flow” of Nature-Heaven is bound to lead to failure. This image is reinforced by another passage later in the book, 6:B:11, where Mencius extols the achievements of the great sage-king Yu, who tamed the Yellow River and made China habitable by wisely following the tendencies of nature—gently guiding the rivers into new channels and helping them along to the sea—as opposed to the evil and stupid flood-control managers of Mencius’s own day, who go “against the flow” (*ni* 逆), attempting to crudely block and radically re-direct the natural flows of China’s rivers and thus bringing disaster to everyone. The harm caused by Yu’s counterparts in Mencius’s age is analogous to the injury caused by the neo-Mohists and their “two-root” strategy, which fails to “flow along with” (*shun* 順) human nature.

8. Conclusion

I assign the portions of the *Mencius* discussed above (in English translation, of course) to students in my undergraduate survey course on Asian religion, and they all find it a powerful and amusing piece of discourse, coming away convinced that the neo-Mohists were misguided or foolish and confident in the wisdom of the Mencian approach to self-cultivation.

The commonality of this sort of phenomenon—an ancient text from a completely alien culture speaking to a modern person with a clear and powerful voice—is similar to the ease with which we reach out and grasp a moving object, or gauge the emotions of a person with whom we are speaking and adjust our tone and body language accordingly: effortlessness in all these cases obscures the staggering complexity of the actual processes involved. Of course the idea of a plant with two roots is absurd. Of course modern American college students react predictably to the image of someone foolishly trying to oppose the inexorable downward flow of water. This sense of cognitive transparency makes it easy for us to overlook how astounding it is that a text assembled in archaic Chinese in the 4th c. B.C.E. by some wizened Confucian scholars could survive the millennia, be translated into modern English, and trigger the construction of spaces in the minds of 21st c. A.D., baggy-pants-clad, MTV-watching California college students in a manner entirely predictable to its original author. Of course, I may in fact have misconstrued some of these passages in a variety of ways: perhaps I am mistaken about the “whirling pool” in 6:A:2 having to do with irrigation management (this is a rather new take on it), or I may be ignorant of some important, relevant features of early Chinese irrigation management that in turn has led to a misunderstanding of Mencius’s position. It is equally possible that I have missed or improperly interpreted some of the entailments of the metaphors invoked, similarly resulting in misfiring of the intended blend construction. This sort of miscommunication is not uncommon with texts from another culture or time—the primary job of linguists and historians being to help prevent us from making such mistakes—and in fact happens all the time even in quite mundane situations. Having grown up in New Jersey, I discovered upon moving to California that many here failed to properly understand caustic sarcasm as an expression of friendly affection. Similarly, we all sometimes drop things, stumble on paths, and misread the facial expressions or body language of others. For the most part, however, we move through our world with consummate ease, and the meaning of the vast majority of even quite culturally alien texts such as the *Mencius* is entirely and immediately transparent to people provided with a decent translation. Occasional failures in comprehension and performance are merely superficial and obvious exceptions that prove the deeply buried rule: human bodies (including the brain part) are built to do certain things, and to do them largely unconsciously and quite well.

As I mentioned in the introduction, part of the point of this exercise is to supplement the theory of conceptual blending proposed by Fauconnier and Turner by showing that the purpose of constructing blends is

often to provoke a particular normative *feeling* rather than to facilitate value-neutral apprehension. I hope that, in addition, I have succeeded in demonstrating that conceptual blending is not unique to modern Indo-European languages, and that its structural dynamics are similar in the cases of both archaic Chinese and modern English. The fact that the blends constructed by the author of the *Mencius* are re-created by our own brains as we read the translated text supports the argument of cognitive linguists that thought is triggered and communicated by language, but not *constituted* by it. Moreover, the fact that even the specifics of most of the mappings considered—including the somatic-emotional reactions they are intended to trigger—are very similar cross-linguistically, and thus immediately comprehensible across the millennia, supports the argument advanced by evolutionary psychologists that human emotional-visceral reactions are fairly invariant and predictable across cultures and times, although the process of conceptual blending allows these reactions to be recruited for a potentially infinite variety of rhetorical purposes. This evidence for what Lakoff and Johnson refer to as the “embodied realist” position is an important corrective to the postmodern cultural relativism and anti-realism that still dominates most fields in the humanities. I hope that this brief discussion of a 4th c. B.C.E. Chinese text has suggested how shared human cognitive abilities, arising from shared bodies and a common physical world, produce a huge foundation of universal conceptual structures—in other words, how there really is a “way we think”.

Received 18 February 2004

University of British Columbia

Revision received 14 August 2004

Notes

- * This article grew out of a talk to the Department of Cognitive Science, UC San Diego, in June of 2002, and the feedback that I received then from Seana Coulson, Gilles Fauconnier, Rafael Núñez, and others was very helpful in its development. I am also grateful for comments from the referees and editors at Cognitive Linguistics that helped me to focus my discussion and broaden my knowledge of the secondary literature. Contact address: Department of Asian Studies, Asian Centre, 1871 West Mall, University of British Columbia, Vancouver, B.C. Canada V6T 1Z2. E-mail: <edward.slingerland@ubc.ca>.
- 1. The role of affect has not been entirely neglected in the literature on blending. Fauconnier and Turner occasionally make reference to the emotional function of blends (e.g., 2002: 66–67, 82–83), and the importance of emotion in moral argumentation is explored at some length by Seana Coulson, who observes that blends are often constructed in order to “structure our expectations and cue the appropriate affective response” (2001: 185). When we consider debate concerning such contentious issues as abortion, Coulson argues that the battle does not revolve around narrow definitional issues or propositional reasoning, but rather how to frame the situation in terms of

already widely accepted cultural models, which have “substantially different moral implications, affective dictates, and physical and social consequences” (244). She also notes that the role of affect and “value” is often ignored by cognitive scientists, “perhaps because it is not easily formalized” (194).

2. Similar observations of the connection between affect, physiological well-being, and evolutionary design inform Gerald Edelman’s idea of the “value memory” encoded in “scenes” (1992: 90–91, 118); for more on adaptationist views of emotion, see Lazarus (1991).
3. Damasio conflates the two primary forms of Enlightenment ethical and practical reasoning—utilitarian cost/benefit analysis and deontological reasoning from first principles—and therefore incorrectly attributes utilitarian views to Kant (see, for instance, 1994: 173–174). This does not affect the validity of his point, however, and we might simply add “analysis in terms of deontological principles” to his mentions of cost/benefit analysis.
4. The fact that emotions are not necessarily conscious is illustrated by a patient of Damasio’s, “David”, whose brain damage rendered him incapable of consciously remembering or recognizing people whom he had met, but whose unconscious preference for “good guy” experimenters (who had treated him kindly in the past) and aversion to “bad guy” experimenters (who had been less pleasant) show how somatic markers bias behavior even when they are not represented in consciousness (Damasio 1999: 43–47). Cf. LeDoux’s account of implicit “emotional memory” (1996: 181–182, 195–198).
5. See, for instance, the description of the famous Phineas Gage, a nineteenth century man whose prefrontal cortex was selectively damaged by an iron tamping rod (8–10), or “Eliot”, a patient of Damasio’s, whose prefrontal cortex was damaged by a brain tumor (34–51).
6. A concern with the role of emotions has gained some momentum in recent decades among philosophers and ethicists; in addition to Johnson 1987 and 1993, see particularly the essays collected in Amélie O. Rorty 1980 and Robert Solomon 2003 and 2004, Ronald de Sousa’s discussion of “paradigm scenarios” (de Sousa 1987), and Martha Nussbaum’s “cognitive-evaluative” view of emotion (2001). For an example of recent fMRI studies concerned with the role of emotion in moral reasoning, see Greene and colleagues (2001). The classic statement of the evolutionary psychology approach to the study of human culture phenomena can be found in Tooby and Cosmides 1992.
7. In the interest of saving space—the importance of which will become more obvious in the mappings below—the fourth element (Generic Space) customarily portrayed in blend mappings will be omitted. In this figure and those that follow, the following conventions will be used: ALL CAPS underlining indicates qualities “native” to a given space, which are then often projected to topologically similar regions of other spaces; *italics* indicate qualities not native to a given space, but projected there from other spaces; and bold type indicates normative qualities—which, as we shall see, are often really the focus of the blend. Brackets indicate counterfactual situations or qualities, and dashed lines are used to draw attention to certain important features of the blend.
8. Coulson makes a related point in her discussion of this blend by noting that one possible reason for recruiting the grave digging space is that it “hyperbolically conveys the seriousness of the target domain situation” (2001: 170) and thus “might plausibly subserve motivational ends” (201).
9. This phenomenon has been explored in some depth by Lakoff (1996). See also Coulson’s observation that framing is an *arguable* process: the topology of input spaces or

“models” is “partial and idealized”, and “mappings from models to situations are underdetermined” (2001: 245). This means that “frame-shifting”—or, to employ the terms we are using in this discussion, the choice and definition of input spaces—is a common and important polemical device.

10. The text of the *Mencius*, although often traditionally said to be the work of Mencius himself, was almost certainly compiled by his disciples or disciples of disciples, and in its extant form was edited and shortened in the 2nd c. A.D. by Zhao Qi, who also wrote the first commentary to the text. Although several minor textual corruptions have been noted, there are remarkably few textual controversies concerning the *Mencius*. It is (especially when compared to other extant pre-Qin texts) an intact and rather well-organized textual account of the teachings of Mencius.
11. As we will see below, his later followers (whom we will refer to as “neo-Mohists”) subsequently modified and elaborated this position slightly.
12. Work by the cognitive scientist Frank Keil has suggested that certain assumptions about the world referred to by Lakoff and Johnson as “folk beliefs”—such as the belief in internal “essences” or the distinction between inanimate and animate objects—may, in fact, be innate to human cognition (Keil 1989; cf. Gelman 2003; Gelman and Markman 1986, 1987).
13. This is why the term *tian* 天 (“Heaven”) continues to maintain its normative force even after it begins to lose its anthropomorphic qualities and come to mean something more like “natural”, a development that begins in the late 4th c. to early 3rd c. B.C.E.
14. In later Chinese, the literal sense was distinguished by adding the “water” radical: 源.
15. For an introduction to the SUBJECT-SELF and CONTAINER SELF metaphors, the reader is referred to Lakoff and Johnson 1999: 269–270, 275.

References

- Coulson, Seana
2001 *Semantic Leaps: Frame-Shifting and Conceptual Blending in Meaning Construction*. New York: Cambridge University Press.
- Damasio, Antonio
1994 *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: G. P. Putnam's Sons.
1999 *The Feeling of What Happens: Body and Emotion in the Making of Consciousness*. New York: Harcourt, Inc.
- De Sousa, Ronald
1987 *The Rationality of Emotion*. Cambridge, MA: MIT Press.
- Edelman, Gerald
1992 *Bright Air, Brilliant Fire: On the Matter of the Mind*. New York: Basic Books.
- Fauconnier, Gilles and Turner, Mark
2002 *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. New York: Basic Books.
- Gelman, Susan
2003 *The Essential Child: Origins of Essentialism in Everyday Thought*. New York: Oxford University Press.
- Gelman, Susan and Markman, Ellen
1986 Categories and Induction in Young Children. *Cognition* 23, 183–208.
1987 Young Children's Inductions from Natural Kinds: The Role of Categories and Appearances. *Child Development* 58, 1532–1540.

- Greene, Joshua, Sommerville, Brian R., Nystrom, Leigh E., Darley, John M., Cohen, Jonathan D.
 2001 An fMRI Investigation of Emotional Engagement in Moral Judgment. *Science* 293, 2105–2108.
- Johnson, Mark
 1987 *The Body in the Mind: The Bodily Basis of Meaning, Imagination and Reason*. Chicago: University of Chicago Press.
 1993 *Moral Imagination: Implications of Cognitive Science for Ethics*. Chicago: University of Chicago Press.
- Kahneman, Daniel, and Amos Tversky
 1982 On the Study of Statistical Intuitions. *Cognition* 11, 123–141.
- Keil, Frank
 1989 *Concepts, Kinds, and Cognitive Development*. Cambridge, MA: MIT Press.
- Lakoff, George
 1996 *Moral Politics: What Conservatives Know that Liberals Don't*. Chicago: University of Chicago Press.
- Lakoff, George and Johnson, Mark
 1999 *Philosophy in the Flesh: The Embodied Mind and its Challenge to Western Thought*. New York: Basic Books.
- Lazarus, Richard
 1991 *Emotion and Adaptation*. New York: Oxford University Press.
- LeDoux, Joseph
 1996 *The Emotional Brain: The Mysterious Underpinnings of Emotional Life*. New York: Simon and Schuster.
- Nussbaum, Martha
 2001 *Upheavals of Thought: The Intelligence of the Emotions*. Cambridge: Cambridge University Press.
- Rorty, Amélie O. (ed.)
 1980 *Explaining Emotions*. Berkeley, CA: University of California Press.
- Slingerland, Edward
 2003 *Effortless Action: Wu-wei as Conceptual Metaphor and Spiritual Ideal in Early China*. New York: Oxford University Press.
- Solomon, Robert (ed.)
 2003 *What is An Emotion? Classic and Contemporary Readings*. New York: Oxford University Press.
 2004 *Thinking About Feeling: Contemporary Philosophers on Emotion*. New York: Oxford University Press.
- Tooby, John and Leda Cosmides
 1992 Psychological Foundations of Culture. In Jerome Barkow, Leda Cosmides and John Tooby (eds.), *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*. New York: Oxford University Press, 19–136.