

One

The Stories Markets Tell

Affordances for Ethical Behavior in Free Exchange

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Opinions about free exchange have fallen on hard times. Major news magazines such as the *Atlantic Monthly*¹ and the *New York Times* have devoted column-inches to the anti-market zeitgeist, and self-organized protests plague World Trade Organization meetings with regularity.² Given the palpable benefits of markets for all involved in them, why is the term *free market* as likely to call to mind images of selfish and insensitive robber barons as it is to evoke scrupulous and other-oriented small business owners and neighbors? This is partly because cartoon versions of the nature and outcome of free exchange, for multiple reasons, have carried the day in the court of public opinion. These cartoons are typified by images of selfish capitalists exploiting labor with glee for the good of no one but themselves. These cartoons, when true, are only *partially* true, and present but one facet of the costs and benefits of free exchange. They do make for colorful stories, however. Sinclair Lewis, for example, would not have made his name writing about the friendly aspects of garden-variety market operations.

These cartoons, however, leave off the considerable moral presuppositions and ethical benefits that free exchange assumes and enables. Stories widely held to be true are not necessarily informed by the results of our best sciences, nor is colorful nature in storytelling tied to the likelihood of resembling reality in any law-like way. Cartoons that declaim free exchange as “selfish” or “exploitative” or “harmful” do have a point in some contexts. A fourth story, however, less cartoon-like and more consilient with what we know about the cognitive mechanisms that allow exchange to take place and which are affected by it, is a *better* story, more true, with more fealty to the phenomenon it professes to be about.

The Freytag triangle is a theory of story that will pave the way for a quick analysis of three cartoons illustrating that “exchange is bad”: the Gordon Gekko greed-is-good, the Karl Marx all-trade-exploits, and the Joseph Stiglitz exchange-is-bad-all-round neo-Luddite narratives. When these stories score points in the popular imagination, it is often because they leverage some aspect of the *ethos* (credibility), *logos* (logic), and *pathos* (emotional) domains,

which the venerable Greek philosopher Aristotle discusses in his *Rhetoric*.³ A counter-narrative that points out the relationship between free exchange and the development and exercise of moral virtue might best allow us to add nuance to the cartoons and revivify the Adam Smith of *The Moral Sentiments* in the public mind.⁴ Market mechanisms can often act as “moral affordances” as well as moral hazards, and this is something we should keep in mind as we explore the costs and benefits of free exchange.

What’s in a Story?

Discussion of stories and narratives is hampered by the fact that there is no widely accepted definition regarding just what a story is. Indeed, an entire school of thought in literary criticism (postmodernism) is predicated on the idea that there are no necessary and sufficient conditions which a piece of text must meet in order to be a story, whether that text is verbal, written, or merely exists in the thoughts of a target audience. We can agree with the postmodernists that defining a “story” is difficult without thinking, however, that the concept plays *no* useful purpose. In that sense, the concept “story” is like the concept “game”—a game also does not require necessary and sufficient conditions for it to be a game, but that does not mean the concept is bankrupt nor that there cannot be “family resemblances” between games that would be useful to consider.

A good first hack, then, at a theory of stories comes from the nineteenth-century German writer Gustav Freytag; this is an admittedly Western notion of the structure of stories, and, though it cannot claim to be comprehensive, it is nonetheless an excellent place to begin. Freytag believed that narratives followed a general pattern: the story begins, a problem arises that leads to a climax, and the problem is resolved in the end. A coherent and unified story could thus be as short as three sentences providing the setup, climax, and resolution, for example: “John was hungry. He went to the store and bought a sandwich. It was delicious.” Of course, this *particular* story is neither interesting nor compelling, but still it is a coherent narrative. This “Freytag Triangle,” depicted in figure 1.1, captures the general structure of a story.⁵

The contemporary literary theorist Patrick Hogan amplifies the basic Freytag structure, pointing out that most plots involve an *agent* (normally, a *hero* or protagonist) striving to achieve some *goal* (usually despite the machinations of an antagonist, or *villain*)—there is a person (or group of persons) and a series of events driven by their attempts to achieve some objective. This familiar analysis is supported by the study of mythology (recall Joseph Campbell’s analysis of the structure of most famous legends from antiquity), and by consideration of many forms of storytelling, whether they are oral, traditional, or contemporary.⁶

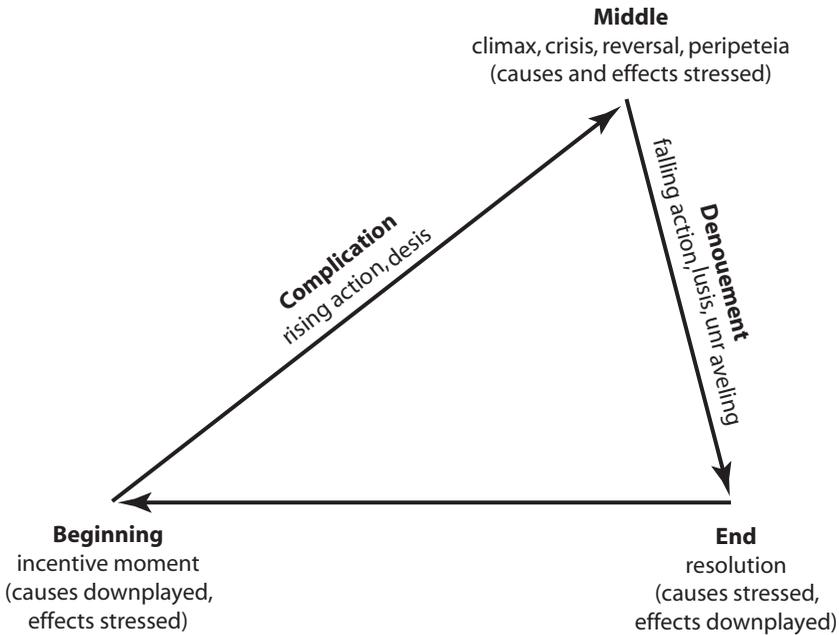


Figure 1.1. Gustave Freytag's triangle (1863)

Why Stories Are So Important

This working “theory of story” will enable us to gain insight into why stories are so important for structuring human thought. First, note that stories often are rich in metaphors and analogies; metaphors, in turn, affect our most basic attitudes toward the world. Suppose, for example, that I think of Islamic fundamentalism as a disease; a simple narrative about fundamentalist Islam might then be the following: “We want world communities to respect human rights. Fundamentalist Muslims disrespect some of those rights. We can prevent them from doing more harm by taking action now.” This implies a series of actions I ought to do in reaction to fundamentalism: combat its spread; focus on this “public health problem” by inoculating people against it; consider those who try to spread it as evil agents up to no good—or, at the very least, modern day “Typhoid Marys”; and so on.⁷

A research program by Mark Johnson, George Lakoff, Giles Fauconnier, and Mark Turner have explored reasoning by metaphor and analogy in a rich research program; they and others conclude that our most complex mental tasks are usually carried out not by the “classical mechanics” of rational actor theory (where stories really have no place in the details) but rather by a set of abilities that enables us to make analogies and map metaphors, which forms

the core of human cognition.⁸ Exploration into the “storytelling mind” is a research program that combines metaphor and analogy into an examination of the powerful grip narrative has on human cognition; narratives can restructure our mental spaces in ways that profoundly affect our reasoning ability and, ultimately, what we make of the world. Think of the grip that the “Jihad versus McWorld”⁹ narrative has on the terrorist organization Al Qaeda and how this affects the way the group thinks about the future; or consider conspiracy theorists, springloaded to see the world of markets entirely in terms of “us” (downtrodden consumers) versus “them” (corporate robber barons).¹⁰ As Mark Turner noted, “Story is a basic principle of mind. Most of our experience, our knowledge, and our thinking is organized as stories.”¹¹

Even if making stories foundational to thought seems a stretch, however, there is *ample* evidence that stories influence our ability to recall events, motivate people to act, modulate our emotional reactions to events, cue certain heuristics and biases, structure our problem-solving capabilities, and ultimately, perhaps, even constitute our very identity.¹² Elucidating each of these points in detail, of course, is beyond the scope of this chapter, but it should be obvious here that the stories we tell ourselves about markets matter.

Some Stories about Free Exchange

At least three archetypical narratives exist about exchange: (1) it is selfish; (2) it is exploitative; and (3) it is, on balance, bad and ought to be rolled back in a neo-Luddite fashion.

The first narrative emphasizes the cutthroat nature of exchange, pointing out that it encourages selfish behavior in those who engage in it. This is the Gordon Gekko “selfish” cartoon. The fictitious Gordon Gekko, portrayed by Michael Douglas in the 1987 movie *Wall Street*, is a ruthless, heartless stock-market trader. In his Gucci suits and slicked-back hair, Gekko’s single-minded pursuit of the almighty dollar wrecks lives and subordinates all other values to the selfish lining of one’s nest with green bills. As Gekko says in the movie, “Greed is good.” The Freytag structure of this narrative is obvious: Gekko becomes involved in market exchange; his soul is corrupted and he becomes an insensitive and immoral boor, causing misery to those around him; he dies a lonely and corrupted man.¹³

This story encourages us to view the world in an “us versus them” mode, where class differences define the in-group and out-group. It also emphasizes the profit motive, at the expense of the other motives that move people to engage in exchange. It goes hand-in-glove with a view of human nature that sees us as natural competitors rather than natural cooperators. It is also loaded with empirical claims about the effect on one’s character of doing business. It is a superb example of the structural effects a narrative can have on just about everything, from how we reason about a situation even to how we think of our own identity.

The second cartoon is closely related. It emphasizes how free exchange, because it often involves the acquisition and accumulation of capital, necessarily exploits those involved, especially the line worker. As wealth accumulates, class distinctions are enhanced, and the owners of capital become distanced in multiple respects from those who labor on their behalf. Workers eventually become aware of these distinctions and, aside from a few under the spell of false consciousness, recognize their alienation from the products of their labor, and eventually rise up to reclaim the means of production on behalf of the people. This is the Karl Marx “exploitation” cartoon, and it exhibits a Freytag structure of “exploitation, rebellion, and reformation.”

Many have criticized the Karl Marx cartoon, roundly and justifiably. Among this narrative’s other cognitive effects, it encourages us to view even consensual exchange suspiciously, as masking exploitative relationships. It emphasizes a certain kind of identity, encouraging solidarity based upon class interest and one’s position in the exchange relationship. It comes with a Manichean worldview, and provides a powerful “workers will rise” punch line, which in turn provides a pleasing justice-related climax to the setup.

The third cartoon is perhaps more moderate than the first two. It emphasizes the negative effects, on balance, of allowing free exchange to occur. Although it may reject the extreme Marxist view, and may have a more sanguine take on how the involvement in markets colors one’s character, it nonetheless emphasizes the harmful effects of the operation of market mechanisms. If we allow markets to continue to operate, free exchange will lead to such dreaded occurrences as the destruction of the environment, a growing rift between the developed and undeveloped worlds, and an over-reliance on technology. This is the neo-Luddite “unhelpful” cartoon, and, at its most extreme, it would have us roll back the clock to a pre-Adam Smith state of affairs.

The neo-Luddite cartoon has powerful appeal. In its moderate form, it points out some of the faults that inflict capitalist manifestations of the free exchange ethos. Negative externalities exist; what are we to do about them? Sensible development is difficult; how does it progress? Joseph Stiglitz and others make neo-Luddite appeals in their writings. This narrative structure encourages us to be suspicious of progress, to look for hidden agendas behind trade and exchange, and to worry—perhaps to a fault—about the effect of globalization on myriad issues ranging from cultural authenticity to the gap between rich and poor.

To prevent misinterpretation, I do not contend that every aspect of these three cartoons is false. A fair examination of the benefits and burdens of exchange will probably include truthful elements from all three critiques (markets sometimes can corrupt; even exchange that is not coerced sometimes does dehumanize; unhampered, poorly thought out development can produce harmful consequences). Generally, however, these pictures of what free exchange does to us and to others are probably not fair, nor are they borne out by empirical examination. Most especially, all three, in their extreme forms, rely

on unrealistic expectations regarding what “plot climaxes” will bring relief to the tension that drives their Freytag triangle–like plot.

Two explanatory burdens present themselves at this point. We need to understand why these narratives capture the public imagination, and to move toward an understanding of how we can redress the cartoons so they become more true and hence probably more useful.

An Aristotelian Evaluative Model: Ethos, Logos, and Pathos

In practice, an effective “counter-narrative strategy” will require understanding the components and content of the story being told so we can predict how it will influence the action of a target audience. In other words, we need a sophisticated understanding of strategic rhetoric. This is difficult to come by. Nonetheless, even well worn and simple models of this process, such as that offered by the ancient Greek philosopher Aristotle in his *Rhetoric*, can be useful for structuring our thinking. Aristotle would have us evaluate three components of a narrative relative to a target audience:

1. What is the *ethos* of the speaker or deliverer?
2. What is the *logos* of the message being delivered?
3. Does the message contain appropriate appeals to *pathos*?

Consideration of *ethos* would emphasize the need for us to establish credible channels of communication, fronted by actors who have the character and reputation required to ensure receipt and belief of the message. “You have bad *ethos*” is merely another way of saying, “You won’t be believed by the target audience because they don’t think *you* are *believable*.” Consideration of *logos* involves the rational elements of the narrative. Is it logical? Is it consistent enough to be believed? Does it contain, from the target’s perspective, non sequiturs and forms of reasoning not normally used day to day? Finally, *pathos* deals with the emotional content of the story. Does the story cue appropriate affective and emotive systems in the human brain? Does it appeal to emotion in a way that engages the whole person and that increases the chances the story will actually motivate action?

Thomas Coakley has summarized the Aristotelian model:

Ethos: these are appeals the speaker makes to the audience to establish credibility. Essentially, *ethos* is what a speaker uses—implicitly or explicitly—to ensure that the audience can trust him or her. An example in advertising is an athlete endorsing an athletic product.

Pathos: these are appeals the speaker makes to the audience’s emotions. An example of this would be an advertisement for tires that emphasizes safety by portraying an infant cradled within the circle of the tire.

Logos: these are appeals to facts. More doctors recommend toothpaste X than any other brand.¹⁴

Some of these Aristotelian considerations will be affected by *structural* elements of the story. Is the story coherent? Is it simple enough to be processed? Can it be remembered? Is it easy to transmit? If believed, will it motivate appropriate action? These aspects of stories will determine whether they can serve as effective mechanisms by which we change payoff matrices in exchange games (see chapter 11);¹⁵ others will be affected by *content*. Does the narrative resonate with target audiences? Is the protagonist of the story a member of the target audience's in-group? Is the antagonist of the story a member of a hated out-group?¹⁶ It is not the primary purpose of this chapter to articulate a comprehensive strategy for ensuring that the cartoons are burished so that they become more true, as well as better, stories. They are effective stories currently, or they would not be popular (largely, I suspect, because of excellent appeals to pathos, good ethos with certain target audiences, and a logos that is at least internally consistent even if it is not true to the actual nature of free exchange). Rather, this detour through Aristotle serves to motivate the next section of the chapter: the perceived *logos* of the story will be influenced by the percolation of results from behavioral economics, neuroeconomics, moral philosophy, cognitive science, primatology, developmental economics, business ethics, and the like, into public awareness—hence the need for the present volume.

The final two sections of this chapter add bulk to one line of (I hope) effective response to these three archetypical cartoons. Situations of free exchange offer multiple affordances for the development and exercise of traits and motivations praiseworthy from any reasonable moral perspective. Findings from the cognitive and social sciences are demonstrating that not only are human beings inclined by nature toward cooperation in many exchange situations (we are, as Aristotle pointed out, rational social animals) but also that the environment of exchange can influence which traits we exhibit. J. J. Gibson's concept of affordances is useful here, as is an understanding of the fundamental attribution error, a well-confirmed finding from social psychology. An explication of these two concepts and their application to the problem of cartoon narratives about exchange follows.

Affordances and the Importance of the Environment: Gibson and Contemporary Social Psychology

Environmental conditions can be considered *affordances*, to use the term coined by the psychologist J. J. Gibson.¹⁷ This term denotes the capacities offered to us by things present in our environments; for instance, in an office environment, a chair “affords” sitting for people. In a garage, a hammer affords

hitting nails. Critical to an understanding of affordances is the *relationship* between the organism and the thing in the organism's environment: some things will be affordances for us but not for other kinds of creatures (for instance, a telephone affords communication for an adult human, but it affords nothing—besides very bad chewing!—for a dog). Cartoon critics of exchange are keen to emphasize the negative aspects of environments where free exchange occurs, but ample positive aspects also exist. These “moral affordances” deserve just as much discussion as the others (more on this below, but see, too, chapter 13, where Kimbrough, Smith, and Wilson essentially discuss institutional affordances for cooperative behavior in their experimental economics work). This finding is counter-intuitive, admittedly, as we tend to “upload” causality into our mind/brain: the truly important causal structures are all in the head. This is too simple, of course, as the *interaction* of our mind/brain with our environment is what produces human behavior.

In a related vein, social psychologists often face an uphill battle when their results run contrary to folk wisdom. Convincing people that a major cause of their behavior is not their personalities but the situation they find themselves in can be truly challenging. Yet, the power of the situation is perhaps the foundation of much social psychological theory and some of the classic studies in the field.¹⁸ When people search for causes of behavior, they tend to ignore the situation and blame (or credit) that which they *do* notice, the person. This is especially the case in individualistic cultures, such as those of the United States or Western Europe:

Members of these cultures typically overestimate the impact and predictive power of observed or assumed individual differences in traits such as charitableness . . . they are apt to rely heavily on overly broad and simplistic notions of good or bad ‘character,’ both in their attempts to understand past behavior and in their efforts to predict future behavior.^{19, 20}

This bias, attributing causes of behavior to actors (i.e., internal, dispositional factors) rather than the situation (i.e., external, environmental factors) is called the *fundamental attribution error* by social psychologists. In other words, whereas Gibson was primarily concerned about the role of extra-cognitive factors in enabling us to accomplish certain cognitive acts, contemporary social psychology has borne out a corollary to Gibson's concept: the environment is a critically important determinant of our behavior, moral or otherwise.

Bringing It All Together: How Free Exchange Can Enable Moral Growth

With this theoretical background, the final task is to demonstrate that free exchange is as much an *enabler* of moral growth and development as it is a

negative influence upon it. Others in this volume have accomplished this much more thoroughly than I can in the limited space that remains (see, especially, chapters 2 and 15). Nonetheless, consider the following points:

1. *Exchange environments can themselves evolve creatures that are prone to cooperation as much as competition* (see chapters 5 and 14). Free exchange offers ecological niches that can be exploited by cooperative behavior as well as defection-laden instrumentally selfish behavior (see chapters 4, 5, and 7). Markets can provide ecological space for cooperative activity to continue to exist. Gekko may have been successful in the short run, but narrowly instrumental selfish agents will not flourish in large-scale exchange situations. Our basic neurobiology provides us with cooperative impulses, which themselves serve as a precursor for the trust and affiliative inclinations necessary to bootstrap exchange activity into existence in the first place (see chapters 3, 6, 11, and 12).²¹

2. *Exchange environments afford critical opportunities for cultivation of the classic virtues.*²² Exchange situations oft-times lack an explicit enforcement mechanism; in some cases, at least, the motivation to follow through on exchange-based commitments must be purely internal (see chapters 2, 9, and 15). As character educators emphasize, practice is necessary for the virtuous both to become virtuous and to maintain possession of praiseworthy character traits. Trust and a handshake are as much a part of typical exchange as are punishment-based law and enforcement via the implicit threat of force or sanction. If we are to make the transition from Lawrence Kohlberg-style “stage 1” egoistic orientations to stage 2 (social convention) and ultimately stage 3 orientations (those of principled moral reasoners), we must be allowed an opportunity to observe others practicing the virtues, and be given the opportunity to practice them ourselves.²³ We also must know what factors in the environment might cause us to act in ways we would not be proud of in our quieter moments. These are familiar themes from the work of the classic virtue theorist Aristotle. To develop virtue, one must have the chance to practice being virtuous. This means cultivating a milieu where the environmental factors that influence human behavior make virtuous behavior the norm rather than the exception. Attention to how you react in these environments is important. People should be aware of the personality/environment interaction, for only then can they modulate their behavior accordingly so that taking virtuous action becomes more likely. As Aristotle states in his *Nicomachean Ethics* (in a passage that refers to his doctrine of the “Golden Mean”):

We must also examine what we ourselves drift into easily. For different people have different natural tendencies toward different goals, and we shall come to know our own tendencies from the pleasure or pain that arises in us. We must drag ourselves off in the contrary direction; for if we pull far away from error, as they do in straightening bent wood, we shall reach the intermediate condition.²⁴

3. *Exchange environments afford incentives to develop and maintain moral standards.* People fall prey to impulses to defect from the institutions that enable cooperative activity, of course—the cartoons are excellent at pointing this out. Markets, however, do not then stand in tension with morality; instead, they provide us incentive to cultivate fellow feeling and a sense of concern for the common good. Given the imperfection of instrumentally oriented enforcement mechanisms, markets actually motivate morality and the development of moral institutions that rely on internal enforcement of norms via a conscience or similar mental capacity. Because regulatory institutions fail, morality becomes a necessity. This is a point familiar to business ethicists (see chapters 2 and 15; for related thoughts, see chapters 8 and 10).

There are myriad other fashions in which parts of the cartoon stories about exchange examined in this chapter begin to fall apart. The aim here has not been to redress the shortcomings of the cartoons—for an admirable and successful attempt to do that, see Paul Zak’s introduction to this volume—but to address threads common to all three cartoons and provide a framework for marshaling evidence in these other areas so as to give free exchange a more comprehensive consideration in, appropriately, the marketplace of ideas.

Conclusion

Economic systems anchored in free exchange have not played well in the popular imagination at the end of the twentieth century. Cartoon versions of “immoral markets” prosper because, in part, they make good stories, but recent advances in our understanding of the cognitive mechanisms that make exchange possible give credence to a narrative about free markets that emphasizes the opportunities they offer to exercise our moral potential. Markets tell many stories; a significant one emphasizes the affordances for ethical behavior that free exchange enables; simply put, markets are important character development mechanisms and provide environmental structure that can anchor moral behavior. The basic theory of story—the Freytag triangle—allowed us to leverage the Aristotelian model of *ethos*, *logos*, and *pathos* to analyze why the “selfish,” “exploitative,” and “unhelpful” cartoons examined in this chapter flourish in the story competition. We can be much more sanguine than these cartoon critics are about the importance of free exchange for cultivating and sustaining moral behavior. Using the notion of affordances and pointing out the fundamental attribution error allows us to articulate an alternate virtue-theoretic story.

Ideally, this narrative, which is more true to the consilient findings of the sciences discussed in this volume, will help shape public discourse in the twenty-first century: it is the *Aristotelian* alternative, which emphasizes *moral markets for ethical exercise*.

Notes

1. See Clive Crook, "Capitalism: The Movie—Why Americans Don't Value Markets Enough and Why That Matters," *Atlantic Monthly*, March 2006, vol. 297, no. 2., pp. 46–8.

2. Consider, especially, the November 1999 protests against the WTO in Seattle, Washington, which shocked trade delegates, involved tens of thousands of people, and received worldwide press coverage.

3. More correctly, in his *Rhetorica*, multiple translations of which are available. For discussion and references, see <http://rhetorica.net/argument.htm>.

4. Smith is usually associated with *The Wealth of Nations*, but his equally important work, *The Moral Sentiments*, highlights the role that fellow-feeling plays in human life, and can be considered a corrective to the simplistic version of Smith one gets by sampling the most popular quotations from *Nations*.

5. For more detail about Freytag, see Barbara McManus, a teacher of literary theory, at <http://www.cnr.edu/home/bmcmanus/freytag.html>. I am indebted to Dr. McManus for allowing me to use her Freytag Triangle graphic.

6. See Patrick Colm Hogan, *The Mind and Its Stories: Narrative Universals and Human Emotion* (Cambridge: Cambridge University Press, 2003).

7. This is an illustration only; this characterization of fundamentalism is flawed in multiple respects, and yet, in other respects, it is, in fact, illustrative.

8. Classic works here include George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980); Dedre Gentner, Keith Holyoak, and Boicho Kokinov, *The Analogical Mind: Perspectives from Cognitive Science* (Cambridge, Mass.: MIT Press, 2001); and Gilles Fauconnier and Mark Turner, *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities* (New York: Basic Books, 2002).

9. This is the structuring metaphor of Benjamin Barber's "clash of the world views" book *Jihad vs. McWorld: How Globalism and Tribalism Are Reshaping the World* (New York: Ballantine Books, 1996). See also Samuel P. Huntington's (in?)famous *Clash of Civilizations and the Remaking of World Order* (New York: Simon and Schuster, 1998).

10. See Fauconnier and Turner, *The Way We think*; or Mark Turner, *The Literary Mind* (New York: Oxford University Press, 1998).

11. Turner, *The Literary Mind*. See also the 2002 groundbreaking work by Anthony Patton, "The World as Story," unpublished manuscript.

12. See, e.g., Alicia Juarero, *Dynamics in Action* (Cambridge, Mass.: MIT Press, 1999); Troy S. Thomas, Stephen D. Kiser, and William D. Casebeer, *Warlords Rising: Confronting Violent Non-State Actors* (Lanham, Md.: Lexington Books, 2005), or Troy S. Thomas and William D. Casebeer, *Violent Systems*, Institute for National Security Studies Occasional Paper (2003); A. C. Graesser & G. V. Nakamura, "The Impact of a Schema on Comprehension and Memory," in H. Bower, ed., *The Psychology of Learning and Motivation* (New York: Academic Press, 1990), 16, 59–109; Maybel Chau-Ping Wong, "The Effects of Story Schemata on Narrative Recall," available <https://repository.ust.hk/dspace/handle/1783.1/1337> (2004); and Daniel Dennett, "The Self as Center of Narrative Gravity," available <http://ase.tufts.edu/cogstud/papers/selfctr.htm> (1992).

13. It is not stated explicitly but only implied in the movie's critical structure that Gekko dies a lonely and unfulfilled human. In some respects, the Gekko character is secondary to the primary dramatic element in the movie involving the union boss and his Wall Street son. I thank Oliver Goodenough and Timothy Kane (of the Heritage Foundation) for reminding me of this point, as well as for other useful critiques and advice on the content and structure of this chapter.

14. Thomas Coakley, "The Argument against Terror: The Peruvian Experience, Globalization, and US Policy," Institute for National Security Studies (INSS) research paper, 2003; available from Casebeer at drenbill@earthlink.net or from INSS at james.smith@usafa.af.mil.

15. Indeed, some structure and content of stories may cause narratives to act as primary reinforcers—that is, just like food, drugs, or sex. A fascinating neurobiological exploration of this process of successful "cultural messaging" is being carried out by Casebeer and by neuroscientists such as Read Montague, the director of the Baylor College of Medicine's Human Neuroimaging Laboratory. Innovative new techniques such as "hyperscanning" allow the study of social cognition in vivo at the neural level using functional Magnetic Resonance Imaging.

16. It may well be that some aspects of narrative are evaluated in exactly the same way that theories in the sciences are evaluated: according to their simplicity, output power, explanatory power, justificatory power, coherence, breadth, clarity, and psychological plausibility.

17. For a more complete discussion of affordances, see "Affordance, Convention and Design," *Interactions*, May 1999, 38–43. Also available at <http://www.jnd.org/dn.mss/affordances-interactions.html>. Most standard psychology or cognitive science textbooks, especially those that stress embodied cognition, may also be consulted.

18. For an in-depth examination, see L. Ross & R. Nisbett, *The Person and the Situation: Perspectives of Social Psychology* (New York: McGraw-Hill, 1991).

19. L. Ross & D. Shestowsky, "Contemporary Psychology's Challenges to Legal Theory and Practice," *Northwestern University Law Review* 97, 1081–1114, 2003, p. 1093.

20. I am indebted to Professor Steve Samuels (Department of Behavioral Sciences and Leadership, U.S. Air Force Academy) for discussion about the fundamental attribution error, and for the substance of the preceding paragraph and the one that follows. For a more in-depth discussion of our views on how the fundamental attribution error influences character development practice, see Steven Samuels and William Casebeer, "A Social Psychological View of Morality: Why Knowledge of Situational Influences on Behavior Can Improve Character Development Practices," *Journal of Moral Education* 34, no. 1 (2005): 73–88.

21. See also William D. Casebeer and Patricia S. Churchland, "The Neural Mechanisms of Moral Cognition: A Multiple Aspect Approach to Moral Judgment and Decision-making," *Biology and Philosophy* 18 (2003): 169–194; William D. Casebeer, "Neurobiology Supports Virtue Theory on the Role of Heuristics in Moral Cognition," *Behavioral and Brain Sciences* 28, no. 4 (2005): 547–548; and Joshua Greene and Jonathan Haidt, "How (and Where) Does Moral Judgment Work?" *Trends in Cognitive Sciences* 6, no. 12 (2003): 512–523.

22. See William D. Casebeer, *Natural Ethical Facts: Evolution, Connectionism, and Moral Cognition* (Cambridge, Mass.: MIT Press, 2003).

23. Kohlberg's six-stage, three-level (ultimately schema-based) system of moral development is well studied. For a summary and critique, see W. C. Crain, *Theories of Development* (New York: Prentice-Hall, 1985), pp. 118–136.

24. Aristotle, *Nicomachean Ethics*, trans. with notes and glossary by Terence Irwin (384–322 BC/1999) (Indianapolis: Hackett, 1985), p. 29.