

Eve and the Serpent: A Rational Choice to Err

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Abstract In dealing with inexplicable disaster, like the untimely death of a child in a hospital, we increasingly turn to the justice system for accountability and retribution. While seemingly sensible, criminalizing human error has a range of negative consequences. But it does offer “good” narratives of failure as the result of human fault—even at the cost of guilt. Such narratives allow us to pinpoint a cause: people made a rational choice to err and should be punished. This allows us to imagine ourselves in control over random, meaningless events. This paper traces Judeo-Christian roots of such regulative ideals in Western moral thinking, by examining the Genesis account of Eve and the Serpent, and St. Augustine’s interpretation of it.

Keywords Human error · Sin · Eve · Serpent

Introduction

My daughter, our first child, died in a hospital when she was 15 minutes old. Some would blame misdiagnosis, or medical error. I remember sitting with a friend and colleague, a professed atheist, not long thereafter, just ahead of a meeting we were going to together. Seared beyond belief, I was groping around through a mist of agony.

“What was the point?”, I demanded. “Is there something that I can pull out of this that helps me go on?”

“It has no meaning”, he said. “There is no point. These are random events.”

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I was crushed and enlightened at the same time. If whatever meaning I read into my daughter's death was my own construction, one not necessarily shared by a good friend and colleague, then this opened up unlimited possibilities for me to find some way of dealing with it. I realized there that we ourselves are the hinge between chaos and meaning. Just imagine the uncertainty, the anxiety unleashed by the death of a baby girl in a hospital; how it may have revealed the messy, hapless interior of a supposedly rational organization and the capriciousness of the results it delivered. A healthcare system that was supposed to provide healing, provided harm. And indeed, there was something inescapably random about the death of my little girl. It happened on just this night, with this nurse or doctor, with this drug or procedure. The chances of all the pieces coming together like they did were mind-numbingly small, infinitesimal. Such indiscrimination leaves us without meaning. Why was it my daughter who died and not my neighbor's? The arbitrariness is so riling, so intractable, that people, from the earliest moments in history, have evoked some kind of order, some significance, to colonize areas of intense chaos and turn them into pockets of bivouac. They took data that did not speak for itself and gave it meaning. They *made* the meaningless data speak, they wrung sense out of it by re-interpreting, re-arranging, renaming. The expressions of such imagination have been, and are, amazingly diverse. It was meant to be, some might say. Or it was fate. Or God's ways are mysterious, or perhaps He had a plan that we can't possibly fathom. Or perhaps it was better for the little girl, she was already very damaged. Or these were trials and tribulations to test and teach us and make us grow, say others. All imaginations allowed them to see the same thing differently. And that helped. It removed some of the wantonness, some of the pointlessness of the death or disaster.

Lots of people are said to die as a result of medical error (Kohn, Corrigan, & Donaldson, 1999). And as a society, we seem to be less and less forgiving of it. In 2006, Julie, a nurse from Wisconsin, was charged with criminal "neglect of a patient causing great bodily harm" in the medication death of a 16-year old girl during labor. Instead of giving the intended penicillin intravenously, Julie accidentally administered a bag of epidural analgesia. Julie lost her job, faced action on her nursing license and the threat of 6 years in jail as well as a \$25,000 fine (The Capital Times, 2006). Julie's predicament likened that of three nurses in Denver in 1998, who administered benzathine penicillin intravenously, causing the death of a neonate. The nurses were charged with criminally negligent homicide and faced 5 years in jail. One pleaded guilty to a reduced charge; another fought the charge and was eventually exonerated (Cook, Render, & Woods, 2000).

In this paper I examine one form of giving meaning to accidental death: that of finding a culprit to punish for it. When we conclude that a death should go onto somebody's account, that somebody is to blame for it, we give that death meaning. Death loses its meaninglessness and randomness, as it was the result of negligence, of criminal behavior. And we can do something about that (like punishing the culprit). Indeed, it seems as if a "true" story of what happened, and who did what, is not as important as a "good" story—a story that presents a causal human fault, even at the cost of then having to assign guilt. This tendency, to construct a narrative of disaster in which somebody made a rational choice to err, has grown to be fundamental to the Western regulative ideal of moral thinking. I will trace some of the Judeo-Christian religious-historical roots for this and try to uncover why it may be that a "good" story of failure—a story that lets us sleep at night, that lets us enter a hospital next time as a patient without undue trepidation—typically features an anti-hero, whose deliberate choice for evil triggers predictably terrible consequences.

Criminalizing Error Creates Meaning by giving us Control

Few things, as Nietzsche pointed out, make us as anxious as not having a cause for things that go wrong. Without a cause, there is nothing to fix. And with nothing to fix, things could go terribly, randomly wrong again—with us on the receiving end next time. Having a criminal justice system deliver us stories that clearly carve out the disordered from order, that excise evil from the good, deviant from the normal, is about creating some of the order that was lost in the disruption of the bad event. Such narratives reflect, said White, “a desire to have real events display a coherence, integrity, fullness and closure of an image of life that is and can only be imaginary” (1987, p. 24). At first glance, calls for disciplinary and even criminal-legal action may seem a sensible way to achieve White’s image: a trial will supply truth and consequences. This expectation is not unreasonable. The U.S. Supreme Court put it most bluntly in 1966: “The basic purpose of a trial is the determination of the truth.” (Laudan, 2006, p. 2). A disinterested party takes an evenhanded look at the case, the appropriate person gets to be held accountable, consequences are meted out—in an immaculate capping of the Enlightenment project. The aim of this intellectual movement in the late 17th and 18th centuries, after all, was to give lay people (not the Church) the ability to search for truth, to understand the true nature of reality, to make up their own minds about right and wrong—all through the application of reason and rationality (Burr, 2003). Courts are thought to be the supremely reasonable arbiters that can do this on our behalf, making judgments based on objective evidence brought out by rational techniques.

But when you come up close, close enough to grasp how trials subjugate case content to judicial form, close enough to hear the doubts of the victims about the wisdom of criminal charges in the first place, close enough to sense the torment of the accused, to feel the clap of manacles around the expression of their own account, to experience the world from the dock and see the unforgiving glare it attracts, a more disturbing reality becomes discernable. In what Dietrich Bonhoeffer called “the view from below,” (Berlinger, 2005) there is a profound helplessness: an account is created by non-experts who select bits and pieces, in a process that runs its own course and over which nobody on the outside, not even the accused, can exercise much, if any, control. The accounts produced, with one culprit pinpointed in a hugely complex, discontinuous process of healthcare delivery, are often anything but rational—or fair, or even truthful. But when we seek meaning in terrible events, “truth” is less important than an illusion of control, of our presumed ability to do something about it. Being afraid of not having a cause is apparently worse than being unfair in constructing one.

But the cost of such accounts is considerable. The accounts of failure delivered to us by the criminal justice system, for example with one culprit excised from a hugely complex, discontinuous process of healthcare delivery, are often far from just. They are also considered bad for safety and quality efforts. Criminalizing error erodes independent safety investigations, it promotes fear rather than mindfulness in people practicing safety-critical work, it makes organizations more careful in creating a paper trail, not more careful in doing their work, it discourages people from shouldering safety-critical, caring jobs such as nursing, and it cultivates professional secrecy, evasion, and self-protection. By making it into the main purveyor of accountability, we are helping our justice system create a climate in which freely telling each other accounts of what happened (and what to do about it) becomes all but impossible. By taking over the dispensing of accountability, legal systems slowly but surely strangle it. If, in the response to disaster, we act in ways that are so clearly not in our own, or in society’s long-term interest, there must be deeper grounds for why such behavior would be deemed reasonable.

We have Long Told Stories of Disaster due to Error

Imposing meaning on terrible, meaningless events through imagination is as old as humanity. The stories imposed not only feed our imagination, they stem from it. Conjuring up causal forces has always figured largely in this. Ancient Jewish tradition held that the sudden death of an infant could be attributed to the machinations of a demon called Lilith, who in turn had responded malevolently either because of the husband's infidelity or the wife's insubordination (Pagels, 1988). A child from the Hopi, a native nation spread across what is now New Mexico, Arizona and Colorado, was bitten by a poisonous spider when playing near its hole. As the child hovered between life and death, the medicine man learned that the father had failed to prepare ritual ornaments for the Spider Woman, the tribe's protector. It was this, he explained, that had brought on the boy's misfortune (Simmons, 1942). What is remarkable about such tales is the amount of responsibility placed on the victim or its near kin, parents in these cases. The error of their ways lead to the disaster. It seems a primordial blueprint. When, in 689 B.C.E. (Before the Common Era) the Assyrians overran and destroyed Babylon, Babylonians regarded their demise as a punishment from their god Marduk. They had neglected his cult, so Marduk had left town and the town got ravaged. Playing off the same sheet not a century later, a prophet of priestly lineage by the name of Ezekiel, walking the ground that Assyrians had pillaged earlier, ranted against the idol worship of his fellow Jewish exiles, and warned of the destruction of Jerusalem back home if they continued much longer.

Creating meaning out of a terrible event through the assignment of guilt to a closely related party (or even by blaming the victim) appears fundamental to societies. Holding somebody accountable has been conflated with placing guilt on that person, with blaming that person, for the longest time. Of course, not everybody welcomed persistent reminders of their own responsibility for the fate they were having to live with every day. Ezekiel, for one, appears to have been murdered by one of the leaders of the exiled Jews whose idolatry he had railed against. And there were other, more fundamentally nonconforming voices (whether historically true or not): Jesus of Nazareth, for example, challenged common wisdom after the collapse of a building when he was said to have asked (Luke 13: 4–5): “Those eighteen upon whom the tower in Siloam fell and killed them, do you think that they were worse than any of the people who lived in Jerusalem? I tell you, no....” Note how wondrously closely this moves to the assertion of my atheist colleague: there is no meaning in this event. That precisely these 18 people got caught up in the collapse has nothing to do with them, it may have been completely random. Yet such dissent was an anomaly. Apparently, even for Jesus himself it was suspended in ambivalence: not much later he urged his listeners to repent lest they suffer a similar fate. People have overwhelmingly tended to accept personal blame for suffering. Disaster is due to error.

Eve and the Serpent

The story of Adam and Eve, as many know it from the book of Genesis in the Judeo-Christian Bible, has had a profound effect on how the West reads the connection between human error and subsequent disaster. Its deep influence stems from a variety of historical and cultural events and forces that span millennia and helped shape the very societies we inhabit today (see Pagels, 1988). While it may be the oldest (it likely emerged in written form around 1000–900 B.C.E.), the story of Adam and Eve is actually not the first creation story in the Bible, but the second. The account that biblical editors ended up placing first,

the Priestly account, so called for its serenity and stately rhythm, originated around 400 B.C.E. Whereas its author seems to have been concerned with drafting a hymn of praise, a doxology that for once and for all put pagan gods in their place, the author of the story of Adam and Eve had humanity and its condition in mind. We may read it as a fable or folklore today, or history even, as some do. But at the time, these stories were already told as allegories, as metaphorical narratives, as poetic pedagogy, as a mix of prescription and explanation, of warning and consolation. They were psychology *avant-la-lettre*, taking on the inner world, confronting basic moral issues and leaving guidance and hope but also ambiguity in their wake.

All cultures evolved allegories about their own birth. And almost all of them started with human beings living in close intimacy with divine beings, with gods. No ontological divide separated humans from gods, and people lived in complete harmony with their environment and with one another: no sickness, no death, no discord (Armstrong, 1996). Authors and storytellers may have invoked these initial stages of bliss to reassure their listeners that life was not meant to be so painful, so separated, that it was all right to long for wholeness. Thus the mythical Garden of Eden, fashioned by J, the author of the second creation story. It had been planted by God, wrote J, into which He let His newly created Adam (“human”) and not much later Eve (“giver of life”) wander to till the earth and enjoy its fruits. Then rather more Babylonian concepts pop up in the garden: a tree of life, a tree of knowledge. One of these was going to play a key role, rudely re-orienting the life trajectories of Eve and Adam, and by implication, humanity as a whole. In an ancient world without national borders and many nomadic peoples, stories and ideas may have traveled quite freely. Even not long after J’s story first may have appeared, the tribes of Israëel and Juda became more sedentary and enjoyed dominion over key caravan tracks that connected Mediterranean and Mesopotamian territories (and beyond, both east and west). This may have facilitated continuing exchanges and the borrowing of mythical notions and concepts across tribal and cultural gaps. The Babylonian author of the Epic of Gilgamesh, for example, whose story had been around for about two centuries at this time, had been concerned with much the same problem as J: when did gods start to separate from the world, when were people left to their own imperfect devices—and why? On that last question, J begged to differ quite radically. Few of the creation stories we know place as much emphasis as J’s on humanity’s free will in their fall from divine grace, few suggest such a clear connection between human error and the subsequent, self-inflicted disaster.

It all got rolling with yet another popular mythical notoriety: a snake. Snakes have played key roles in many myths across the world, from ancient ones of Eskimos in the far north (who don’t even have snakes!), to Kipling’s more recent Jungle Book and the shield of the medical profession. Apparently the snake offered the convenient embodiment of a wise, but wily and beguiling mind. Whereas later renderings of the story depict the serpent as an embodiment of Satan, this would not have been possible around J’s time. Only Persians were known to have a clearly dualist ontology as necessary precondition for any sort of devil; an existence of two primal and independent personifications of good and evil, and those ideas first penetrated Jewish religion half a millennium after J. The notion of a Satan and the underworld he ruled instead has its roots in Greek, Roman and Teutonic mythologies, and Faustian pacts with a Devil did not gain popularity until Medieval times. All, including a Persian occupation, significantly post-dated J’s account. What may matter, then, is that J would not have intended for evil to enter to paradise extraneously. In fact, J sketched the serpent’s qualities in quite human contours, as a human alter ego as it were, or a consciousness. His dialogue between Eve and the snake suggested an affinity between it and Eve, and at the introduction of the snake onto the scene, he played a word trick,

matching attributes of the snake and of people. Adam and Eve were, in Hebrew “naked” (*arumim*), and the epithet J used for the snake’s guile was “crafty” (*arum*). While different in etymology, these were similar enough for J to possibly propose a connection (Armstrong, 1996). Through the free will bestowed upon Adam and Eve by their Creator, J had baked the very potential for deviance into humanity. Now he needed a trigger, an agent to pry open this human capacity for conscious, considered aberration. The serpent was cast in that role.

Freedom of action, without coercion, is necessary for moral responsibility (even if it may not be sufficient). That is why it may have been so important for J to cast the serpent anthropomorphically. Not a Satan, who had come up for air and moral mischief from his Hades (since none of those concepts existed in J’s time), capable of deploying asymmetric resources, arm-twisting gullible humans into buying his sick ploy. No, all that the serpent was, said J, was crafty. But Eve was crafty too. Quite the serpent’s match. In his best lawyerese, the serpent began by inquiring “Is it true that God has forbidden you to eat from any tree in the garden?” It was a large, categorical question that J made the snake ask, probably deliberately, as it allowed him to subsequently put Eve’s acuity on display. It was not just about eating, Eve explained to the snake. The fruit of the tree in the middle of the garden was not even to be touched, never mind the eating part. If they would, they would die. Getting this one up on the snake allowed Eve to build in some margin for any further negotiations. After all, the regulations had never said anything about touching, only about eating. She made the other part up. J cannot have left this one to chance: already Eve was showing an independent wisdom, separate from God’s. Eve waited for the snake’s next move. It ignored the subtlety—eating, touching, whatever—moving immediately to challenge Eve’s contention of the consequences. “Of course you will not die!”, it proclaimed. God knows that. And He also “knows that as soon as you eat it, you will be like gods, knowing both good and evil.” Eve thought about what the snake had said. Then she turned to the tree. The fruit actually looked pretty good. It was pleasing to the eye, and tempting to contemplate. She relented, took some, and ate it. Then she gave some to Adam, and he ate it too (Genesis 2:3–7). And what about the consequences? The serpent proved more truthful than God. Neither Eve nor Adam died. In fact, Adam lived for another thousand years, the allegory would go on to tell us. But the serpent had also overstated its case (probably part of negotiation tactics too): the fruit did not quite deliver to Adam or Eve any profound divine insight, only the realization that they were *arumim*, aware for the first time of their dissimilar genders, their differentiation as people, their individuation. The primal unity from Eden had been broken: for the first time people experienced separate identities, as well as a profound sense of vulnerability and separation from the divine fold. Being *arumim* really means naked in the sense of unprotected, exposed, fragile (see Armstrong, 1996).

A Rational Choice to Err?

The negotiation between the snake and Eve, this dialogue among equals, was to become a crucial hinge in the development of Western moral thinking. Both the snake and Eve possessed deeply human qualities, both had been jocularly provided by J with their own kind of *arum*, and both were crafty enough to bend the truth and aim high in their submissions to the debate to bolster their own positions. The snake grossly exaggerated the benefits of the fruit, Eve blew the regulations out of proportion. But it is in this negotiation

that the seed for the basis of Western moral thinking was planted. Eve was not irrational: J made her display the fullest and most acute of mental faculties. Eve was not bullied or bludgeoned or bamboozled into eating the fruit. Sure, the snake was smart, but that was all he was. And so was Eve. Eve, J showed us, made a deliberate, considered, rational choice. A rational choice to err. A rational choice to violate the regulation, in full knowledge of the potential consequences. As if it were a prototype for moral action and responsibility, Eve's conduct perfectly matches our current definition of criminal negligence, or recklessness, the kind that we now charge nurses such as Julie of:

...to be reckless, the risk has to be one that would have been obvious to a reasonable person. It involves a person taking a conscious unjustified risk, knowing that there is a risk that harm would probably result from the conduct, and foreseeing the harm, he or she nevertheless took the risk...recklessness is a conscious disregard of an obvious risk (GAIN, 2004, p. 6).

The risk that Eve was taking was quite obvious to her (even if it had been downplayed by the snake). She took the risk consciously, as J showed her to be quite present-minded: a rational, reasonable person. And the risk she took was unjustified: not only did it violate applicable rules in the garden of Eden, it actually was quite gratuitous. She was already getting smart, becoming an independent thinker, and there was plenty of other fruit to eat in Eden, would that have ever been an issue. She knew that harm would probably result (again, even if the snake had sowed some doubt about exactly how much). Foreseeing this harm, she nevertheless took the risk, consciously disregarding it. Eve was reckless. A rational, reasoning being, she chose to err, she freely elected to violate, knowing that she was doing it, and knowing the consequences. If anything ever was, then this was free will in full splendor. In our definition of culpable behavior today, three thousand years later, we remarkably invoke the exact same ingredients of free will and use it to judge accountability against.

But is that reasonable? Consider, once again, the conditions enjoyed by Eve in her deliberations on whether or not to err. J gave her full rationality, the luxury of time, the opportunity for negotiation and rationalization in the presence of another critical mind. This is hardly how decision making looks in the typical safety-critical setting from which our legal system today pulls individual people to hold accountable. Like the nurse Julie. In fact, Eve's situation is in many ways at odds with the real conditions under which people perform work: where resource limitations and uncertainty severely constrain the choices open to them. Van den Hoven (2001, p. 3) called this "the pressure condition," where practitioners such as nurses and pilots and air-traffic controllers are embedded in a narrow "epistemic niche." They can only know so much about their world at that time: they do not possess kind of full rationality asserted on behalf of Eve. All rationality is local: based on people's knowledge, understanding and goals at the time, not based on some universal ideal overview of all the possible pathways and risks associated with them. If only we had that! Yet the definition of recklessness seems to imply that we can expect this of operational people. That is inhumane. Claus Jensen, in his review of the Space Shuttle Challenger accident, wondered whether there still is.

"any point in appealing to the individual worker's own sense of responsibility, morality or decency, when almost all of us are working within extremely large and complex systems ... According to this perspective, there is no point in expecting or demanding individual engineers or managers to be moral heroes" (1996, p. xiii).

People's moral authority is typically constrained to the point where appeals to their individual moral responsibility quickly become shrill and disproportionate. Authority is not only restricted because of the larger structures or organizations that people are only small parts of. Authority to assess, decide, and act can be limited simply because of the nature of the situation. Time and other resources for making sense of a situation are lacking; information may not be at hand or may be ambiguous; there may be all kinds of subtle organizational pressures to prefer certain actions over others; and there may be no neutral or additional expertise to draw on. Such environments are exceedingly hostile to the kind of reflection necessary to meet the regulative ideal of individual moral responsibility laid out by J in the second Creation story. Yet this is exactly the kind of reflective idyll we read into the story of Adam and Eve and the kind we retrospectively presume on behalf of operators in difficult situations that led to a mishap. Free will is a logical impossibility in cases where there is a mismatch between responsibility and authority, which is to say that free will is per definition a logical impossibility in real settings where real safety-critical work is carried out.

Augustine: Suffering is due to Human Fault, even at the Cost of Guilt

But still, we seem to think that it is quite reasonable to assume that a nurse like Julie had the free will to err or not to err. Just like Eve in the Garden of Eden. We seem to think that this assumption is quite reasonable, despite overwhelming evidence that real decision-making situations are nothing like that. As argued before, our belief in free will may have very little to do with the situations on which we so easily impose it after the fact. It is not really about those situations. Asserting free will is about us: it says something about ourselves, about our desires, anxieties. For this we have to thank one of the greatest theologians, if a disturbed one, in the early centuries of the Christian church: Augustine. His interpretation of J's story would become codified in Catholic doctrine, affecting our culture and everyone in it, Christian or not, to this day. Suffering, said Augustine, is the result of human faults. Augustine recognized that people would rather feel guilty than helpless, that they would be willing to accept a version where human suffering occurs solely because of human fault. This appealed to the need to feel ourselves in control, even at the cost of guilt (Pagels, 1988). His version of the second creation story played brilliantly on the human tendency to appoint and accept blame for suffering (remember the Hopi story and the charges against Julie), as it answered to the fundamental need for finding meaning, finding a reason, finding something to hold onto, something to control when confronted with seemingly random, inexplicable pain.

The double-whammy offered by the paradox Augustine left behind proved too powerful to resist, even today. He both denied and acknowledged human helplessness in the face of disaster. We could partly blame our ancestors Adam and Eve for spilling their original sin over us, said Augustine. This made death something unnatural. Death, mortality, it was all their fault, introduced by their transgression. Death and pain, in other words, could be traced to a specific act by a specific person. Recognize how this matches the anthropological observation that our culture in the West does not differ much from so-called primitive ones: we both refuse to accept the notion of "natural death" (see Douglas, 1992). But Augustine's teachings also assured us that the death or suffering visited upon us, while unnatural, was not random. Both the cause and the meaning of suffering lay in the sphere of moral choice, he argued, not in nature. That goes for our moral choices too.

Conclusion

If we can make somebody bear the guilt for the outcome of choices that can be constructed to have led to disaster, it at least gives us something to do. We can make specific changes. We ourselves can repent and find different ways to live our lives, as Ezekiel would have advocated. Or we can have one of our legitimated institutions deal out guilt, and tell us a story that particular people were deviant or criminal. They can then remove them from our safety-critical activities. But the stories that we thus accept are not about history. They are about the future. They are allegories, reflexive ones, that talk about us. Through them, we not only make the meaningless and random meaningful. We also acquire an imagination of control. These stories give us a way of enchanting our own future, of colonizing a little part of it. They give us the fantasy of being able to ward off evil. By assuming that people had a rational choice to err, and by now deeming them guilty of an amoral decision, we impose some kind of order, predictability, preventability onto complex, confusing and threatening events. We unstably but doggedly hold up that crucifix, that little mirror, just in case disaster decides to give our neighbor a pass next time, and hit us right between the eyes instead. That nightmare is worth keeping at bay, no matter the price to be borne by a nurse like Julie.

References

- Armstrong, K. (1996). *In the beginning: A new interpretation of genesis*. New York: Alfred A. Knopf.
- Berlinger, N. (2005). *After harm: Medical error and the ethics of forgiveness*. Baltimore, MD: Johns Hopkins University Press.
- Burr, V. (2003). *Social constructionism* (2nd ed.). London: Routledge.
- Cook, R. I., Render, M., & Woods, D. D. (2000). Gaps in the continuity of care and progress on patient safety. *BMJ*, 320, 791–794.
- Douglas, M. (1992). *Risk and blame: Essays in cultural theory*. London: Routledge.
- GAIN (2004). *Roadmap to a just culture: Enhancing the safety environment*. Global Aviation Information Network (Group E: Flight Ops/ATC Ops Safety Information Sharing Working Group), p. 6.
- van den Hoven, M. J. (2001). *Moral responsibility and information technology*. Rotterdam, The Netherlands: Erasmus University Center for Philosophy of ICT, p. 3.
- Jensen, C. (1996). No downlink: A dramatic narrative about the challenger accident and our time. New York: Farrar, Strauss, Giroux, p. xiii.
- Kohn L. T., Corrigan J. M., & Donaldson M. (Eds.). (1999). *To err is human: Building a safer health system*. Washington, DC: Institute of Medicine.
- Laudan, L. (2006). *Truth, error and criminal law: An essay in legal epistemology*. Cambridge, UK: Cambridge University Press, p. 2.
- Pagels, E. (1988). *Adam, Eve and the serpent*. New York: Penguin Books, p. 145.
- Simmons L. W. (Ed.). (1942). *Sun chief: The autobiography of a Hopi Indian*. New Haven, CT: Yale University Press.
- The Capital Times (2006, November 2). *Elbow S. St. Mary's nurse is charged with neglect: medication error led to teen's death*. Madison, WI: author.
- White, H. (1987). *The value of narrativity in the representation of reality*. Baltimore, MD: Johns Hopkins University Press, p. 24.