


# *Philosophical Questions and Biological Findings*

with Marcia Pally, “Philosophical Questions and Biological Findings, Part I: Human Cooperativity, Competition, and Aggression” and Marcia Pally, “Philosophical Questions and Biological Findings, Part II: Play, Art, Ritual, and Ritual Sacrifice.”

## PHILOSOPHICAL QUESTIONS AND BIOLOGICAL FINDINGS, PART II: PLAY, ART, RITUAL, AND RITUAL SACRIFICE

by Marcia Pally 

*Abstract.* This Part II of a two-part article illustrates how research in evolutionary biology, anthropology, archeology, and psychology illuminates questions arising in philosophy—specifically questions about René Girard’s theory of aggression. Part I looked at: (i) how old the *systemic* practice of severe aggression is; (ii) how much of it results from humanity’s mimetic/social and competitive nature and how much from ecological, resource, and cultural conditions; and (iii) if ecological, resource, and cultural conditions are important, might we adapt this information toward greater cooperativity today? Part II investigates Girard’s theory of ritual sacrifice—especially human sacrifice—as a societal steam valve for the systemic aggression explored in Part I. It draws on theories of play, theater, and art to examine the role and function of such ritual sacrifice.

*Keywords:* archaic societies; cooperativity; René Girard; Johan Huizinga; human aggression; hunter-gatherer society; Siegfried Krauer; mimetic theory; ritual sacrifice; Robert Sklar

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### INTRODUCTION: JUST HOW AGGRESSIVE ARE WE?

Part I of this project recalled that when the French philosopher René Girard said that human competitive violence is as old as the biblical Cain, he likely did not mean to launch a new debate about when precisely that moment was. But his views on human competition, violence, and our responses to violence have done something like that and allow us to explore how questions arising in philosophy and theology are enriched by research

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in evolutionary biology, anthropology, psychology, and archeology. Philosophy and theology, to be sure, also enrich questions in the physical sciences. But this project attends to the contributions these physical sciences make to philosophical and theological propositions in Girard's work.

Part I focused on the origins of severe, systemic aggression of the sort recorded after 8,500 B.C.E. as the Mesopotamian, Mediterranean, and certain African regions developed a sedentary, agrarian economy. It looked as well at the conditions needed for such aggression to take hold. Part II looks at Girard's theory of ritual sacrifice, especially human sacrifice, as a steam valve for the accumulating societal tensions explored in Part I. How do biology, anthropology, psychology, and archeology—along with theories of play and art—enrich and critique Girard's propositions? First, I will briefly recap Girard's mimetic theory and the conclusions of Part I. I'll then explore how the sciences and theories of art and play enhance the discussion of ritual sacrifice.

With the aim of understanding the origins and tenacity of human aggression, Girardian theory begins with humanity's foundational social nature. As we live in groups, we are acculturated by our milieu and internalize its practices and values such that many people in society value similar things, both those needed for physical survival and those that acquire cultural importance. To describe the process he called "mimesis," Girard wrote, "Our neighbor is the model for our desire" (Girard 2001, 10). Girard further holds that, as we desire what our neighbors desire, we find ourselves in competition with them, in "conflictual mimesis" (Girard 1977, 187). From this comes an antagonistic view of one's neighbors and potentially society-rending tensions and aggression. "The principal source of violence between human beings," Girard concludes, "is mimetic rivalry" (2001, 11).

Thus, mimetic theory can be understood as *linking* mimesis, competition, and aggression. The condition of desiring what one's neighbors desire yields a certain amount of competition and thus strife. As in mimetic theory this mimesis/shared-desire is an unavoidable feature of our living together, so too is competitive aggression—that is, until we learn not to take from each other but to give. Donation, on Girard's view, is the great teaching of the cross, where Jesus, having given years of his life to aid and teach humanity, gives life itself for humanity's sake.

Girard illustrated his ideas with historical and literary examples dating back to what he called the "archaic," the agrarian societies with tribal clusters and cities beginning roughly 4,000 B.C.E. and ending with the Greco-Roman period. This epoch was indeed one of strife, and we may use the violence of that period as a functional definition of severe, systemic aggression: endemic raiding and warfare, the enslavement of captive populations, and the subjection of domestic populations to severe injury, maiming, torture, capital punishment, harsh imprisonment, continued resource

deprivation (impoverishment), forced labor (servitude, enslavement), conspecific killing (within-species), and rituals involving human sacrifice or exile.

Girard's focus on the archaic prods the question of what human life was like before, during the long period of hunter gathering beginning with the first "modern" *H. sapiens* roughly 200,000 B.C.E. until the advent of fully sedentary agriculture around 8,500 B.C.E. in the Mesopotamian basin, Mediterranean lands, and parts of Africa. This extended hunter-gatherer period included certain forms of aggression but possibly forms that were not as severe and systemic as recorded for the later archaic.

Two important possibilities arise: if hunter-gatherers practiced severe, systemic aggression in ways and frequencies similar to those of later agriculturalists, one might surmise from mimetic theory that the linked sequence of mimesis/shared-desires > competition > severe, systemic aggression was fairly consistent throughout both the hunter-gathering period and the later archaic. Mimesis remains linked with competition and aggression. But if hunter-gatherers were not usually or not frequently systemic perpetrators of severe violence, perhaps mimesis, competition, and aggression are not so linked. Hunter-gatherers may have been mimetic, acculturating to group norms and developing shared desires, but they may have practiced less severe, systemic aggression than later agriculturalists. On this reading of mimetic theory, mimesis may be foundational to the species, but not all instances of mimesis are "conflictual" or lead unavoidably to competition and aggression. Indeed, some mimesis may make a positive contribution to humanity's social living—not "conflictual" but "positive mimesis." In that case, severe, systemic aggression may not emerge inevitably from humanity's mimetic nature.

Mimesis may thus be understood as a content-neutral form of cultural transmission that teaches both prosocial and aggressive norms. The systemic practice of severe aggression then depends on additional factors, which inform the outcomes of mimetic transfer—prosocial or aggressive. These factors may change over time, and humanity might have some control over which conditions are supported in our societies. This view bodes a bit better for human behavioral plasticity as it does not lock humanity into a mimesis > competition > aggression inevitability.

Part I looked at both possibilities mentioned above. The first sees aggression from episodic intimidation to war as dating back to early *H. sapiens* two to three hundred thousand years ago. For instance, Marc Kissel and Nam Kim, in their important literature review, find that "emergent warfare" was part of human capacity as much as three hundred thousand years ago (2019, 157; Majolo 2019, 321). The second possibility sees less continuous development, with a meaningful increase in severe, *systemic* aggression after roughly 8,500 B.C.E. prodded by changes in living conditions accompanying the development of agriculture. Matthew Zefferman

and Sarah Mathew note the “transition from low-risk, small-scale territorial raiding to high-risk, large-scale warfare,” which they hold is culturally prodded. Bonaventura Majolo holds that human development was likely spurred by both cultural and genetic adaptations (2019, 323). I concur in Part I and add only those ecological and resource conditions that too influenced the rise in aggressive practices.

While capacity for aggression may be hundreds of thousands of years old, as Kissel, Kim, and Majolo note, evidence of *occurrence* of severe, systemic aggression before the mid-Holocene is rare (Majolo 2019, 322). This lack of evidence is not well-accounted for by a “preservation bias,” where severe, systemic aggression in fact occurred earlier, among hunter-gatherers, but evidence is scant because evidence degrades as it ages. Looking at periods close in time, just before and after the advent of agriculture, we nonetheless find meaningful differences in evidence of aggression. Zefferman and Mathew write, “The archeological record does not provide much evidence of warfare in Pleistocene forager societies. Outside of the Gebel Sahaba Paleolithic cemetery in Sudan, dated 10,000–12,000 BC, 83 there is no strong evidence of inter-group conflict until the Mesolithic period (approximately 10,000 BC) in Europe and the Near East” (2015, 59). The contested Sahaba evidence is reviewed in Part I while Lee Clare et al. date inter-group aggression even more recently, “There is presently no conclusive evidence for inter-group fighting in the early Pre-Pottery Neolithic” (10,000 to 8,800 B.C.E). This period lies immediately prior to the high levels of severe, systemic aggression recorded after the advent of agriculture. One must regard a lack of evidence with caution as it does not prove lack of occurrence. Yet, based on currently available findings, Clare et al. caution against projecting aggression from later periods onto earlier ones (2019, 101).

In short, if the evidence shows more severe, systemic aggression post-agriculture and less even a short while before, the hypothesis that agriculture contributed to conditions that influenced aggressive practices may account for present data. At least it may account for it more soundly than (i) the hypothesis that the severity and frequency of aggression were fairly consistent for hundreds of thousands of years or (ii) the hypothesis that the severity and frequency of aggression gradually increased throughout the hunter-gatherer periods with but speculative evidence of a change in conditions to account for the increase.

To sum up Part I so far: working with presently available evidence, our second possibility posits that mimesis and shared desires, as old as the species itself, are not themselves sufficient conditions for the development of systemic, severe aggression. Hunter-gatherers—95 percent of human development—were mimetic but appear to have engaged in severe aggression less systemically. Other conditions are needed for such aggression to take hold and came into play around 8,500 B.C.E. in the Mesopotamian,

Mediterranean, and North African regions. At least some of these conditions accompanied the emergence of agriculture in these areas.

What was the mechanism by which the new agrarian conditions contributed to more severe, systemic aggression? A quick summary of Part I will again be useful here. While evolutionary pressures pre-agriculture had yielded episodic aggression where advantageous—resource grabbing, intentional injury, raiding, and killing—they also yielded the substantial intra-group “hypercooperativity” (Tomasello 2019, Kindle Locations 5521–22) and egalitarianism associated with hunter-gatherer life, including communal property and child-rearing and robust fairness/sharing norms. Christopher Boehm describes the emergence of hunter-gatherer egalitarianism so that “over time, the apelike, fear-based, ancestral version of personal self-control would have been augmented, as there appeared some kind of a protoconscience that no other animal was likely to evolve” (2012, 161). With sedentarism and agrarianism, however, ecological and resource conditions underwent one of the most substantial changes in human pre-history. These contributed to manifold changes in human socioeconomic behavior and in the severity and systemic nature of aggression both within and between groups. Hunter-gatherers undertook aggression when (i) rewards were greater than risks, (ii) chances of success were high, and (iii) risk of harm to oneself was low (Majolo 2019, 327; Wrangham 2019, 262). Yet, the radically new phenomenon of regular agrarian surpluses nearby and ever ready for plunder may have made the potential rewards of resource grabbing (intra- and inter-group) outweigh the risks far more often than they did under hunter-gatherer surplus-less mobility.

Resource grabbing allows for resource monopolizability and sociopolitical hierarchies (the last of which had diminished in the human evolution to egalitarianism, Boehm 2012). By contrast, in hunter-gatherer societies, equitable sharing of minimal, perishable resources had the evolutionary advantage of keeping more people alive with greater chances to reproduce. “Hunters and gatherers,” Kappeler explains, “forage cooperatively, share what they hunt/collect, and consume it on the spot. Agriculturalists don’t rely on cooperation; they produce surplus stock for themselves which can be taken by force” (2019). On this account, the two to three hundred-thousand-year-old capacity for aggression, heretofore episodic in occurrence, became increasingly severe and systemic in the face of changed conditions. To this point, Robert Sussman asks, “Are war, crimes, and violence the genetic, unalterable norm, or are they specific to stresses that occur when too many people want too few resources, or to social inequality, or environmental perturbations, or a plethora of other causes...?” (2013, 107).

In sum, both hunter-gatherer and agrarian societies had mixes of cooperativity and aggression. Human behavior is “plastic, open equally to both altruistic cooperation and deadly conflict” (Ferguson 2013, 192).

Yet, the manifold, radical changes that agrarianism entailed may have been sufficient to turn episodic occurrence of aggression into systemic practice and so to meaningfully alter the mix of cooperativity and aggression in society.

### RITUAL SACRIFICE IN HUMAN DEVELOPMENT

Alongside the origins of severe, systemic aggression, a companion research area emerges in mimetic theory: the role of ritual sacrifice in human culture. On Girard's account, one way to dispel the societal tensions accumulating from mimesis/shared desires and competition was through human or animal sacrifice. This rite identifies a scapegoat whose death or exile, it is thought, removes the "evil" that is generating societal tensions and placates the gods, who too must be angry at evil's presence. Sacrifice both acts as a steam valve for competitive aggression as aggression is released in the ritual itself and it bonds the group in unifying against the scapegoat. "The community unites against a victim in an act of spontaneous killing. This act unites rivals and restores peace and leaves a powerful impression that results in the establishment of sacrificial religion" (McDonald 2003). Importantly, ritual sacrifice requires complex cognitive and organizational skills, which, Girard held, supported the development of ancient religions, their rules, and personnel. These in turn formed the basis for other societal institutions. Ritual scapegoating sacrifice, with its complexity and violence, are at the foundation of civilization.

This understanding of sacrifice prods the question: why did early *H. sapiens* bother to dispel accumulating tensions? Why not have Hobbesian war? The effort presupposes a certain preference for basic societal harmony as maintaining it is the purpose of ritual sacrifice. And, this cannot be assumed: our closest cousins the chimpanzees don't share it. Their range of behavior, from bonding to killing, allows for far more intra- and intergroup aggression than the human range. Put two hundred and fifty chimpanzees in a plane for eight hours and you'll have a massacre (Hrdy, cited in Wrangham 2019, 28), not complaints about the choice of movies. If the people of Girard's "archaic" (early agrarian) period generated society-rending aggression yet nonetheless sought to ward off its worst effects, from what in their evolution or experience did this harmony preference develop?

The second approach to this material, described above, may be helpful here in pointing to the two hundred thousand years of less severe, systemic aggression and considerable cooperativity among hunter-gatherers. After such a long period of cooperativity, the systemic aggressions emerging with agrarianism would have been experienced as something new, as violating long-evolved cooperativity. By trying to contain the new aggressions, early agriculturalists might have been attempting to preserve

something of the cooperativity they were used to and that had sustained their communities for many millennia. Thus, it seems that Girardian theories of sacrifice as steam valve and peace keeper hang on the prior development of a harmony preference, at least some of which remained even amid new systemic, agrarian aggression. A many millennia-long period of hunter-gatherer cooperativity (with episodic aggression) prior to the advent of agriculture may be the most proximate experience bequeathing to early agriculturalists such a harmony preference.

Girard's theory of sacrifice as steam valve and peace keeper is important as it tries to explain violence where biology finds hypercooperativity: within the primary hunter-gatherer group. Yet at present, current evidence for hunter-gatherer ritual sacrifice is scant and speculative. For instance, the Göbekli Tepe ritual site, shared by roaming forager groups before agrarianism was ubiquitous in the region (9000–7000 B.C.E.), shows no evidence of human or animal sacrifice. Benoît Chantre writes, "Many clues lead one to think that the progress of the sacrificial institution is linked to that of urbanization," the city clusters that emerged with agrarianism (2019, 183). In short, Göbekli Tepe was a site of much ritual but not sacrifice. By contrast, the more recent Çatalhöyük, site of a densely populated Anatolian community during the development of agrarianism (7500–5700 B.C.E.), contains signs of ritual, art, human-on-human aggression, and perhaps sacrifice. This lends weight to the second approach mentioned above, which posits an increase in severe, systemic aggression with the advent of agriculture. It is the later *agrarian* site—but not the earlier forager one—that *may* evince aggression sufficient to warrant a steam valve *cum* peace keeper such as ritual sacrifice.

The absence of sacrifice artifacts at Göbekli Tepe thus makes a weak case for Girard's idea that ritual sacrifice developed among hunter-gatherers, became the basis for the rules and structures of religion, and thus formed the basis for the more complex, societal institutions of the later archaic. This artifact absence is, however, consistent with other principles of mimetic theory in that hypercooperative, egalitarian hunter-gatherer societies with robust fairness and sharing norms and less competition, such as those visiting Göbekli Tepe, would have less need for a societal steam valve and thus less need for scapegoating sacrifice. What, then, was the function of the other rituals at Göbekli Tepe? If not as a steam valve for intra-group tensions, why and how did they begin? Here, research in the sciences, specifically on mimesis, human cognition, and social organization, may be helpful. It is to a recap of this research that we now turn; a fuller account can be found in Part I of this project.

THE ROLE OF “MIMESIS” IN HUMAN COGNITION,  
COOPERATIVITY, PLAY, AND RITUAL

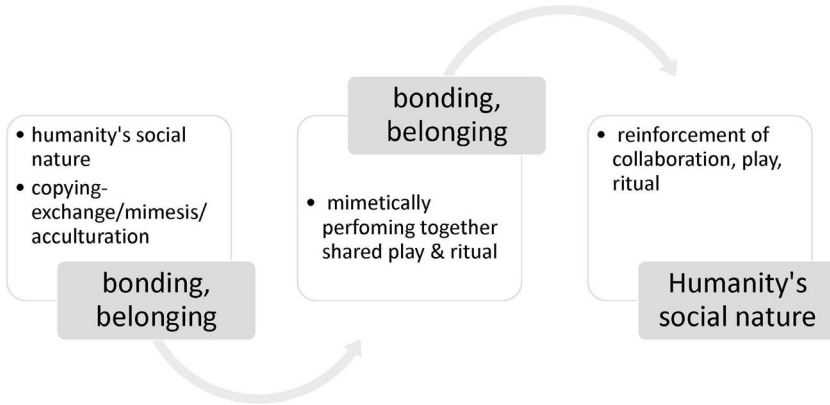
Mimesis begins with the playful copying and exchange of gestures and facial expression between human infants (with long, dependent childhoods) and their kin and nonkin caretakers. This exchange, Shaun Gallagher notes, “brings the infant into a direct relation with another person and starts them on a course of social interaction” (2005, 128; see also, 224–25, 244–45). This extensive back-and-forth yields a “we-centric” or “unified common intersubjective space” (Gallese 2005, 105, 111) with a wide variety of others that even infants know are different from themselves. To mimic and be mimicked is to participate in the world of different others—not an undifferentiated we-space but an I-you space (Reddy 2008; 19–21; Hobson and Hobson 2012, 120–121). Human cognitive and emotional growth is grounded in this interaction to arrive at what Sarah Hrdy calls “emotional modernity” (Hrdy 2009, 204–206, 282): the capacities to grasp and coordinate with (i) the attention of others, (ii) the intention of others, and (iii) the emotions of others in order to sustain relationships through which one feels safe and learns about the world. Importantly, learning and relating generalize to strangers, a capacity that became critical for communal childcare, as Hrdy (2016), Kristen Hawkes (2014), and Michael Tomasello (2019) note.

Tomasello’s work on cognitive development (2019) adds that joint attention and intention created the basis for role reversal and recursive thinking. Role reversal entails the understanding, for instance, that if I touch your arm, you touch not your arm but *my* arm. This allows tasks to be separated from actor—it’s touching the arm of the *other* that is the task—and to be distributed to various persons. Recursive thinking involves my understanding that you want me to know that you know that I know, and so on. Together, these allow for complex, collaborative endeavors where actions may be assigned to various persons, each knows the other’s role and, importantly, trusts that the other will do it.

These basic abilities also foster an additional cognitive capacity: the abstraction of sequences of behavior from the immediate context. This enables humans to learn tasks not only for present but also future application and to symbolically (in gesture and language) re-enact not only past tasks but past *events*, to communicate future collaborative plans, and to describe a hypothetical scene (Donald 2001, 263–65). That is, not only how one used this tool but how one *could* use it in a situation that has not yet occurred.

Among humans, it is not only memories that can be recounted but imagined worlds. The imagining of the conjectured and fictional by a species capable of (i) complex collaboration in (ii) repeatable activities (iii) with agreed-upon intention (goals and procedures) may be the origin not only of survival projects like food procurement but of play: games,





**Figure 1.** Cycle from humanity's social nature through mimesis to play/ritual.

theater, and art. These three features together with imagined worlds are all present in play activities. *And from play—repeatable, intentional activities that reference the past, future, and the imagined—may come ritual, an intentional activity that repeats action-patterns and references the past, future, and the believed.* Johan Huizinga, in his classic study of play, wrote, “in myth and ritual the great instinctive forces of civilized life have their origin: law and order, commerce and profit, craft and art, poetry, wisdom and science. All are rooted in the primaeval soil of play” (Huizinga [1938] 1950, 5). Tomasello nearly eighty years later echoes, “cognitively, the dual-level structure of simultaneous sharedness (creating socially shared realities) and individuality (individuals’ perspectives within those shared realities) characterizes everything from children’s pretend play to adults’ cultural institutions” (2019, Kindle Locations 5769–71). Shared worlds, real and imagined, allow for shared, collaborative, intentional activities from sports to worship services.

While these cognitive capacities help explain why play, theater, and ritual are humanly possible, they do not yet explain function: what benefits does play/ritual provide? I’ll look at two, beginning with bonding/belonging. We have seen that mimesis promotes a “we-centric” or “unified common intersubjective space” (Gallese 2005, 105, 111) through which we align ourselves with the attention, intention, and emotions of others in order to sustain relationships, feel safe, and learn about the world. As mimesis develops into collaborative play and ritual, they too contribute to this reciprocal alignment and sense of bonding and belonging. *The activity of mimetically performing together shared ritual patterns gives humans the sense of relatedness and belonging needed for our long-evolved social nature* (see also Figure 1). Children who lack mimetic, collaborative play suffer from cognitive and emotional impairment (IJzendoorn et al. 2011;

Nelson, Fox, and Zeanah 2014). Adults who become isolated suffer from increased risk of suicide, mortality (Pantell et al. 2013), and morbidity, including depression and other emotional disorders (Cacioppo and Cacioppo 2014; Leigh-Hunt et al. 2017; Laugesen et al. 2018).

Clare et al. describe the pre-agrarian Göbekli Tepe ritual site as such a bond-building arena, which, could be understood as the stage and scenery for a late hunter-gatherer mythological narrative, one used by these communities for the conveyance of shared moral values, the documentation of group memories and histories, the formation of identities, and the promotion of intergroup cooperation and altruism. (2019, 105)

In addition to bolstering altruism, belonging, and common values, as Clare et al. write, play and ritual serve a second function: they “play-act” what troubles us. From “horsing around” (playing at fighting) to fairy tales, roller coasters, and theater, play allows us to near and experience—or nearly experience—fears, tensions, and greatest hopes in the relatively safe environment of the game so as to better broker them in our emotional and psychological centers. As we confront the fears and desires that threaten safety and the self, the fictive confrontation tells us that we can survive *because* in every play event, no matter how much it skirts danger, we end alive and intact.

The final if implicit scene of fiction/ritual is survival: we have made it through the gauntlet. Robert Sklar writes that fiction gives audiences the experience of “the dangerous, the fantastic, the grotesque, the impossible, at a close but safe remove” (1975, 21). When the game is over or the lights come up, the lesson is that, no matter how many players are “dead” in the game or on stage, we prevail. We are psychologically bolstered for the risky project of living.

The first human fictions, as Freud reminds us, are dreams, which theatricalize what disturbs and frightens us. But we do much of our play awake and together because of the cognitive/emotional process described above: mimesis bolsters feelings of belonging and safety, and as mimesis develops into play and ritual, these too make for feelings of belonging and safety, especially needed when confronting danger and daunting hopes. This, Siegfried Kracauer holds, is what we do when we create awake-dreams in theater, film, and other ritualized re-enactments. We depend on them “for the reflection of happenings which would petrify us were we to encounter them in real life” (1960, 305). When a hunter-gatherer band paints or enacts a dangerous hunt, the group confronts its hopes and trepidations in the safe, controlled arena of the ritual, and courage is bolstered for the hunt itself.

Play and ritual, then, are mediating forms that allow us to broker dread and daunting. The severe, systemic aggression found in early agrarian societies brought just the sort of dread to make art and ritual about. It was, like

many societal threats, a danger that the human mind mediates in dreams, play, and ritual to be better able to cope in life.

Ritual sacrifice in particular, theatricalizing aggression “at a close but safe remove” (Sklar 1975, 21) was a quadruple hitter for the sacrificing community (if not the victim). First, it is a steam valve for societal resentment as anger at the new agrarian inequalities, a violation of longstanding egalitarianism, is displaced onto the victim and released in the brutality of the sacrifice itself. Second, ritual sacrifice helps grapple with fear of the new societal violence by staging it. The ritual allows the sacrificers to near the mortal dangers present in agrarian society but to near them in theatricalized form—in the *ritualized* murder or exile of the victim. From this dramatic, frightening but contained performance, the sacrificers are bolstered for dangers of the world.

Third, sacrifice is not just any ritual but one that creates an “outsider” or “other” (the sacrifice victim), further reinforcing in-group bonds. Building on attachment theory (Bowlby, 1973, 1980, 1983), Carol Gilligan and Naomi Snider note that the separation of me/us from “them” is a psychological defense mechanism of first resort in response to trauma and fear (2018). The binary of us/them assures “us” that we’re the good people, not responsible for the ills perpetrated by “them” but right to fight back against those who have wronged “us.”

Moreover, the “splitting” of “we the good” and “them the bad”—a move of emotional scapegoating—is magnified when large numbers of people are harmed by the same or related aggressions and fears (Volkan 1997, 27, 111). This sort of widespread duress was a feature of the new inequalities and aggression of early agrarian living. As an emotional mechanism to cope with the new aggression and fear, sacrifice may have served to separate the good “us” from the bad “them,” identified as the sacrifice victim, who is targeted as the source of societal tensions. The ritual steam valve allows the elites and poor of early agrarian society to bond together against “them” (the sacrifice victim), thus pre-empting revolt, assuaging elites, and giving hope (or distraction) to the poor. The benefits in societal stability and emotional relief are not unsubstantial.

Fourth, the sacrifice ritual did all this in a shared, mimetic rite that boosts a sense of belonging and safety. Once sacrifice was in practice, it may well have contributed to the development of other rituals. But it may also, as Girard suggests, have contributed to the conditions for other forms of societal aggression as, unlike a play or dream, sacrifice perpetrates actual killing and exile.

The findings at the Çatalhöyük archeological site illustrate the fear-mediating functions of fiction/art and ritual as well as the difficulties in interpreting fossil and archeological remains. To begin with the interpretive difficulties, some of the skeletons show head injuries, which may result from aggression or sacrifice but they may also result from theatrical or

“play” fighting, arduous initiation rituals (fictive enactments of the dangers of male adulthood), or from falls, accidents, friendly fire during hunts, and male-on-female abuse in the newly patriarchal social order. Caution must also be taken in interpreting foundation burials (skeletons found in the foundation of a house) as a “sacrifice” meant to boost the well-being of the house’s inhabitants. It is difficult to determine whether such bodies were sacrificed for this purpose or had died of other causes before or during house construction. Çatalhöyük, moreover, has no art showing house-foundation sacrifice.

Çatalhöyük art does, however, show animals as predator and prey, suggestive of prehunt ritual or posthunt celebration. In some images, humans tease and overpower the animal, also suggestive of confidence-boosting theater. Domesticated or tame animals are almost never depicted. Animal skulls, antlers, and boar tusks were used as decorations, symbols of power over dangerous but now subdued animals. These decorations too are a kind of art/theater that recalls life’s perils in a form in which they are no longer perilous.

Several images depict animals in highly stylized formations, further suggesting the images’ function as theater. Two leopards are seen in symmetrical mirroring, an orderly configuration that creates for the viewer a sense of power and control over the (dangerous) scene. In another image, two symmetrical rows of people are dressed in leopard skins, “costumes” of might and power, as they dance before a line of animals to be captured in something like *Busby Berkeley* for the Neolithic. Here, we have a full-fledged script of (fictively, ritually) confronting dangers and emerging the victor.

Ian Hodder (2019) and others have suggested that Çatalhöyük art is not a theatricalization that mediates the fears and dangers of the hunt but rather that it depicts the killing of animals domesticated for the purpose of ritual sacrifice (and only later for food). Yet, Chantre among others finds this unlikely as Çatalhöyük art includes no images of sacrifice, of the slaughter, pyres, and other sacrifice accoutrements. Moreover, Chantre continues, as pre-agrarian *H. sapiens* had used animals for food for many millennia, it is strained to argue that newly agrarian societies would stop doing so just as they had developed capacities for herding and thus a more stable supply of meat. Chantre posits that only when agriculture was firmly established in the middle Çatalhöyük period, “when the basic food supply was assured, around 6,500 B.C., and when domestic animals (sheep and goats at Çatalhöyük) provided a store of meat sufficient for the group’s survival, that the sacrifice of wild animals could have acquired a ‘memorial’ value, in other words a ritual meaning” (2019, 173; Kappeler 2019).

Chantre’s reading is consistent with the idea that play and ritual may well have developed pre-agriculture (either as a bonding mechanism or as a way to psychologically process fear/danger, or both) but that animal sacrifice developed later, as herding stabilized the meat supply and animals

could be spared for ritual purposes. And just as the meat supply was stabilizing in these agrarian/herding societies, resource monopolization and the new systemic aggression presented dangers and fears that might be (temporarily) assuaged by art and rituals. The useful, multi-purposed sacrifice may have been one of those rituals.

Mimetic theory discusses an interesting alternate approach to the development ritual sacrifice. It notes that many-against-one aggression differs from one-on-one and many-on-many violence. Many-on-one aggression, including aggressive scapegoating, lowers the risk of harm to the many, allowing them to more easily overcome human hypercooperativity and other barriers to brutalizing the victim. As one-on-one and many-on-many forms of aggression entail risks to the group that many-on-one violence does not, many-on-one forms of violence may more easily take hold. This suggests that many-on-one aggression may have emerged before other forms of aggression, if only for strategic, self-preservation purposes.

On this view, many-on-one aggression, including outbursts of scapegoating, may have emerged early in human development and been ritualized later into a sacrificial rite. This is an important consideration as it again seeks to explain aggression within the primary hunter-gatherer group, where hypercooperativity and fairness/sharing norms were high.

It may indeed be that episodic many-on-one violence, including scapegoating episodes, emerged early in *H. sapien* development, as did episodic one-on-one violence and opportunistic many-on-many aggression. At present, however, we lack biological and archeological evidence of it. Fossil markers do not readily distinguish many-on-one aggression from other aggressive forms among hunter-gatherers. Simply put, fossil remains showing lethal injury do not straightforwardly reveal the injury's source. Even multiple injuries could result from several causes including arduous initiation rites, messy friendly fire, a serious accident, etc. Conversely, ritual sacrifice may entail only one blow, the source of which would be difficult to determine by evidence available today.

Importantly, in pre-agriculture artifacts, we lack art depicting many-on-one aggression, including scapegoating. Thus, it is difficult to determine if and when many-on-one aggression occurred. Additionally, evidence for pre-agrarian scapegoating sacrifice—a many-on-one aggression in ritual form—is speculative. The intriguing many-on-one hypothesis remains an area for continued study. Present evidence does allow us to say, however, that animal and human sacrifice were present in the period of sedentarism and agriculture, the period from which Girard developed mimetic theory.

In sum, given the present data base, we do not know if scapegoating sacrifice is the ritualization of earlier, episodic outbursts of many-on-one aggression, including scapegoating episodes, as mimetic theory proposes. The section on play and ritual above suggests that (i) ritual *per se* may have developed among hunter-gatherers for the purposes of bonding/belonging

(Göbekli Tepe) and to mediate life's fears and dangers (Çatalhöyük), and (ii) ritual scapegoating sacrifice in particular may have developed in sedentary agrarian communities as a fictive form to mediate fears of the new, severe, systemic violence of agrarian living. This suggestion is consistent with the evidence for (a) the development of hunter-gatherer rituals *per se* (e.g., at Göbekli Tepe) and (b) the development of danger-mediating fictive forms (e.g., at Çatalhöyük and elsewhere). We note that the lack of present evidence for pre-agriculture, many-on-one aggression-including aggressive scapegoating and ritual scapegoating sacrifice—does not prove that it did not occur. But if the ritual sacrifice documented in the agrarian “archaic” is to be understood as the ritualization of earlier, *pre-agriculture*, many-on-one scapegoating, evidence of such pre-agriculture scapegoating at some point needs to be identified and documented.

### CONCLUDING THOUGHTS

This two-part article has aimed to illustrate how issues in philosophy and theology are enriched by evolutionary biology, anthropology, psychology, and archeology (Part I) and additionally by theories of play, art, and ritual (Part II). The issues in Part I were: (i) how old is the systemic practice of severe aggression? (ii) How much results from humanity's mimetic, competitive nature and how much from ecological, resource, and cultural conditions? (iii) If ecological, resource, and cultural conditions were important, might this information help us in structuring society for greater cooperativity today? Part II explored the role and function of ritual, including ritual sacrifice, in human living.

These questions were prodded by the work of René Girard, whose mimetic theory has influenced not only his original fields of philosophy, sociology, and literature but, over the last half century, theology, neuroscience, political science, media studies, and more. The physical sciences support several aspects of mimetic theory: (i) its description of mimesis/acclaculturation as foundational to human living is consistent with findings on humanity's earliest cognitive and social development; (ii) its description of the competition and severe, systemic aggression of the agrarian “archaic” is consistent with the research on early agricultural communities in the Mesopotamian basin, Mediterranean lands, and parts of Africa; (iii) its understanding of ritual sacrifice in the (agrarian) archaic as a mediating form to help people cope with danger and fear is supported by theories of play and art and by the substantial record of intra- and inter-group aggression, danger, and fear post-agriculture.

At present, the evidence is insufficient to support the Girardian hypothesis that scapegoating sacrifice in the (agrarian) “archaic” period is indeed the ritualization of pre-agriculture episodes of aggressive scapegoating. We do not yet know if such scapegoating occurred or if it

occurred frequently enough to work its way into human culture. While a range of episodic aggressions was present among early *H. sapiens*, there is little fossil, archeological, or biological means to determine if any instances were the result of Girardian scapegoating rather than accident, friendly fire, initiation rites, etc.—that is, to distinguish the markers of scapegoating aggression from those of other forms of aggression. Girard's ideas await further findings. Similarly, evidence is insufficient to claim (i) that the occurrence of (not capacity for) severe, *systemic* aggression can be dated to early, pre-agriculture *H. sapiens* or (ii) that the occurrence of severe, systemic aggression can be attributed to a spontaneous escalation throughout the hunter-gatherer period. As the fossil and archeological evidence is scarce and difficult to interpret, this is also an area in need of additional findings and further analysis.

I would like to close with the somewhat optimistic recognition that, even with humanity's record of aggression, we are, as Richard Wrangham writes, "a dramatically peaceful species" (2019, 19) with the capacity to identify conditions that support cooperativity in our societies. We are also able to make art and ritual in response to the wonders and dangers of the human condition. If the theories of play and art discussed above are correct, this playful ability is not a recent add-on to the human repertoire, as severe systemic aggression may be. It is foundational to our cognitive, emotional, and social capacities—in short, to what it means to be human.

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