9 The Evolutionary Roots of Media-Based Moral Panics

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Introduction

Academic study of aggression and violence has long struggled with the degree to which aggression can be understood as an evolutionary or learned behavior. In the mid-1980s, a group of scientists penned the famous (or infamous) Seville Statement on Violence (Adams et al., 1990), which declared in no uncertain terms that it was scientifically inaccurate to link violence to human nature (see Pinker, 2002). To say that this statement was unfortunately timed wouldn't do it justice as the Seville Statement managed to just predate an explosion of evidence noting that biological factors do, in fact, predict violence (see, e.g., Barnes et al., 2014). The Seville Statement nonetheless, became influential, being adopted by UNESCO and published favorably in the flagship journal of the American Psychological Association. As such, the Seville Statement provides a remarkable example of moralistic intrusion into science, in this case presenting a moral belief (that violence is not inherent to the human species) in the language of scientific fact. These issues are common to topics related to violence, where evolutionary explanations of behavior have been controversial, despite data to support them, and a preference for learning-based explanations of behavior evident.

In the 1990s, culminating with the 1999 Columbine Massacre in which two youths killed 12 students and a teacher at their school before committing suicide, a rash of school shootings achieved international attention. These shootings were perpetrated by young males, often from communities not traditionally connected with crime. Some commentators observed that many of these young males had played violent video games of one sort or another. Indeed, many scholars who investigated links between violent video games and aggression began to commonly recite a litany of school shootings to introduce their papers (e.g., Anderson, 2004; Anderson & Bushman, 2001). The revelation that so many young school shooters seemed to play violent video games was often treated by society as a seminal finding of public health importance, ignoring that almost all young males similarly played violent video games, the vast majority without subsequently engaging in criminal enterprises (Griffiths & Hunt, 1995). Scholars testified before the US congress that violent

games and other media were a substantial contribution to violent crime (e.g., Anderson, 2000) and compared their effects to those of smoking on lung cancer and other important medical relationships (see Markey, Males, French, & Markey, 2015 for a list of such quotes). That violent video games caused not only mild aggression in players but also criminal violence appeared to be a sure thing, and it seemed that the time to act (presumably, via censorship or regulation) was now.

By the 2010s, however, the picture looked quite different. The US Supreme Court had ruled that, not only were video games protected speech, but that the research evidence linking games to harm in minors was underwhelming and unconvincing (Brown v EMA, 2011). Reviews from other countries such as Australia (2010), Sweden (2011) as well as even the antimedia advocacy group Common Sense Media (2013) all acknowledged that research evidence linking violent games to harmful aggression was mixed, at best. While professional guilds, such as the American Psychological Association, maintained that links between video games and aggression existed (2015, although they did acknowledge research couldn't support links with violence), their task force on the matter was met with resistance by a group of over 230 scholars who wrote an open letter requesting that the APA remove all their policy statements on video games (Consortium of Scholars, 2013). Over the years, research evidence (e.g., Ferguson et al., 2015; McCarthy, Coley, Wagner, Zengel, & Basham, 2016) accumulated that violent video games may not even cause relatively minor increases in aggression or hostility. And some studies (e.g., Cunningham, Engelstatter, & Ward, 2016; Markey, Markey, & French, 2015) found that the release of popular violent video games into society was associated with reductions in criminal violence, not increases. By the time of this writing (2017), the video game violence field has fallen far from the heady heydays of the mid-2000s, during which expansive claims of detrimental effects were accepted almost without question.

Attempts to involve evolutionary psychology in the examination of violent media have been relatively few, perhaps unintentionally preserving the gulf between environmental and genetics research. Only two studies have attempted to bridge the two, one with general media use including video games (Ferguson, Ivory, & Beaver, 2013) and the other with television violence (Schwartz & Beaver, 2016). In both cases, results indicated that genetic predisposition explained links between media use and subsequent criminality. This view is consistent with the catalyst model of violent crime (Ferguson et al., 2013) which suggests that an interaction between genetic risk and harsh upbringing, combined with stress tends to produce crime, but that media violence is too distal a factor to have significant input. Thus, young males may be both highly involved in action-oriented video gaming and also risk-taking behaviors including crime without media directly asserting any causal influence.

Although the issues faced by the video game violence field likely parallel wider problems for psychological science, they also present an interesting case study in how evolutionary theory can help in understanding the development of a scientific field. In particular, the question that this chapter seeks to answer is how is science influenced by dominance struggles between older, established adults, and youth seeking to overthrow the status of the old? And to what extent does regulating and censoring the flow of information, particularly to the young, play a role in maintaining dominance hierarchies in society?

The Evolution of Moral Panic

Like many social animals, humans develop social hierarchies of influence in which some individuals have more influence than others (Barkow, 2014). In spite of countervailing movements toward egalitarianism and democratic ideals, both in small and large groups, some individuals will take an assertive role in leadership that comes at the expense of the influence of others. Although historically influence could be achieved through feats of physical prowess (and still sometimes is; e.g., with athletes), dominance can typically be achieved in modern societies through wit and charm mixed with strategic aggression (what we euphemistically refer to as assertiveness). Nonetheless, the achievement of dominance, as in the historical past, brings with it a perception of mating fitness along with other perks. Nowadays, displays of financial wealth are associated with mating success, though mainly among males rather than females (Gallup & Frederick, 2010; Kruger, 2008).

The factors that determine who does and who does not obtain a dominant position of influence and authority are, of course, complex. As noted, there are likely multiple routes to influence. Some individuals may simply be more motivated towards achieving a dominant position in society, whereas others are more pliant, content with conventional roles, although some situational-specific aspects, such as preexisting access to resources (e.g., by being born to a dominant family group), do come into play as well (Bornstein, Riggs, Hill, & Calabrese, 1996). Dominance is also associated with biological factors. For instance, blood serum levels of testosterone are associated with dominance in both men (Rowe, Maughan, Worthman, Costello, & Angold, 2004) and women (Grant & France, 2001). These levels of testosterone across the lifespan also tend to track with rates of violent behavior including violent crime (e.g., Dabbs & Dabbs, 2000; Wilson & Daly, 1985) suggesting that testosterone, risk-taking, and sexual competition are linked phenomena, particularly for males. Even the production of violent entertainment including video games itself appears to be correlated with youth and maleness (see Lange & Schwab, this volume).

In complex human societies, dominance is likely to be expressed in multiple ways. These include not only political and decision-making power but also control over language, culture, and the arts. Establishing control over popular culture can be one means of establishing dominance and, through this, enhancing self-esteem (Barkow, 2014). However, popular culture continually changes, and these changes threaten existing dominance hierarchies. As such, innovations in popular culture can be seen as threats, not only via harm to children, but also to the self-esteem of older adults who are left behind and disenfranchised by newer popular culture because they do not consume or participate in this new popular culture. Similar issues can be seen regarding new technology (e.g., cell phones) more broadly.

The Goldilocks Effect

Although power and dominance may become centralized among middle- and older-aged adults, innovation often takes root among the young (see chapter by Lange & Schwab, this volume), perhaps because younger individuals are more likely to adopt newer forms of thought (Simonton, 2017). Accordingly, with popular culture, changes tend to take place among the young. These same young individuals may also be striving to challenge the existing dominance hierarchy, to assert their own influence at the expense of older adults. Invariably, this creates conflict between older and younger individuals over control of (popular) culture.

Seeing their culture threatened by innovations among the young, innovations which may specifically push the boundaries of what is acceptable, older adults may find newer elements of popular culture to be threatening and offensive. This creates a cycle in which generations of individuals push the boundaries of popular culture in order to assert their dominance at the expense of older individuals. These individuals later reverse course and adopt protectionist views of their own popular culture once they, in turn, become older adults. This creates the so-called goldilocks effect in which each generation thinks it got popular culture just right, that is, pushing the boundaries appropriately without stepping over them.

This repetitive pattern can be witnessed over and over through history (and, indeed, is typically looked back upon with mirth even by individuals contemporarily engaging in the same pattern). Consider, for example, elements of popular culture from the 1980s, such as heavy metal music (Ozzy Osbourne, say) or the pen-and-paper role-playing game *Dungeons and Dragons*. Both of these elements of popular culture were very seriously (to the point of TV documentaries and congressional hearings) linked to a wide range of negative public health outcomes, from suicide to delinquency to occultism (Scheel & Westefeld, 1999; Simon, 1987). The involvement of social science in such fears is also nothing new as one study from the 1990s suggested that exposure to heavy metal music was

a strong predictor of youth suicide (Stack, Gundlach, & Reeves, 1994). However, these views are not often taken very seriously today with many heavy metal acts ranging from Alice Cooper to Ozzy Osbourne enjoyed by legions of white-haired fans, and role-playing games, such as *Dungeons and Dragons*, enjoyed by many older (if geeky) adults.

The same cycle has repeated with video games with fears first over primitive games, such as *Space Invaders* and *Zaxxon*, before moving on to congressional hearings over games like *Mortal Kombat* to attempts to regulate *Grand Theft Auto* to the inevitable panics over virtual reality games. By the very fact that video games have been able to continually adapt, improve, and offer new experiences, they have prolonged the moral panic concerning their content (people now scoff to consider *Pac Man* a violent video game, though some scholars in the field still consider it to be so, see Rushton, 2013).

That fear of video games is largely a product of age (and experience with games) is, by now, well established in the empirical literature. This generational effect has been demonstrated for the general populace (Kneer, Munko, Glock, & Bente, 2012; Kneer Glock, Beskes & Bente, 2012; Przybylski, 2014), as well as among clinicians (Ferguson, 2015) and scholars (Ferguson & Colwell, 2017; Quandt et al., 2015). This last point about scholars may help to understand why academic debates so often become acrimonious, with deeply held truisms advocated by older scholars (through which they assert their dominance) being overthrown by young, upstart but skeptical researchers. Thus, the entire traditional media effects hypothesis, at least as developed under various hypodermic needle models,[1] such as the general aggression model (Anderson & Carnagey, 2014), internalization of the thin ideal (Rice et al., 2016), or cultivation theory (Gerbner et al., 1994) may themselves prove to be a casualty of generational struggles among scholars. Such struggles for dominance among generations of scholars are not unexpected given competition for limited resources (grant money, newspaper headlines) and older scholars defending theoretical viewpoints associated with their names from young, upstart, skeptical scholars.

The Moral Foundations of the Video Game Debate

One thing that becomes apparent in the video game debate is that different individuals are able to look at the same media (i.e., action-oriented video games) as well as the same data (i.e., research on action-oriented video games) and come to very different conclusions. In this respect, the field of video game effects, including the behavior and opinion of scholars, appears much more similar to politics than it does to an objective science. The fundamental question is: How do presumably rational human beings find it possible to come to diametrically opposed views when given the same data?

This puzzle has been studied, particularly in relation to politics, through the lens of moral foundations theory (MFT; Graham & Haidt, 2012). Put briefly, moral foundations theory suggests that human conceptions of morality have evolved as brain modules designed to tackle moral quandaries in ways that enhance the survivability of the individual (also see Matthews, this volume). Moral judgments are made along several dimensions including caring for others, loyalty towards the group, sanctity toward cultural norms, fairness and respect for authority. Each of these moral judgments is considered to be evolutionarily adaptive, both individually as well as through the survivability of genes among kin. These moral judgements promote group cooperation and, evolutionarily speaking, groups tended to form along lines of related kin. Group cooperation also promotes individual survivability and, as such, is likely to be selected for (see Velez, this volume). Disagreeing with group consensus risks social ostracization and decreased survivability. Other aspects of cultural taboo can focus on elements of direct survivability (for instance, food items that may be high in bacterial content in a particular region) even if such issues are implicit rather than explicit in the taboo (e.g., avoiding pork due to religious concerns rather than directly relating pork to high infection rates.)

Phenotypical variations in these traits produce individuals who vary across the spectrum of beliefs. For instance, political liberals may value caring and fairness to a greater degree whereas conservatives may value authority, sanctity, and loyalty (Graham, Haidt, & Nosek, 2009; Haidt & Graham, 2007). This is not to suggest that environmental factors are uninvolved, of course, merely that evolutionary factors can also be important. Because individuals value certain moral components over others, it may be difficult for them to understand the moral views of others. Further, for some individuals, moral values may shift over time, such as leading individuals to become more conservative with age.

In understanding the debate over video games, it helps to see this debate as a moral one, at least as much as a scientific one. That's not to say that scientific data is irrelevant, far from it; much of the challenge to the effects view arose from well-conducted studies producing null effects or failed replications. But the intrusion of morality into the action video game debate is observable even in the lamentable fact that scholars in the area chose to use the term violent video game rather than something less emotionally evocative. Indeed, it is curious to note that when some scholars study the positive (in the sense of socially desirable) influences of the exact same games (usually first-person shooters), they use the more neutral term action game (e.g., Bejjanki et al., 2014). Thus, scholars in the field appear to be making deliberate decisions to codify the language of the research in explicit moral terms. Eventually these terms become the convention for the field, despite their unscientific nature.

The term violent video game is a largely nonsensical one, and its typical definition so broad as to include almost all video games. Indeed, during a murder trial in 2013 (Rushton, 2013), one scholar advocating the harm view of video games acknowledged that *Pac Man* could be considered a violent video game. In this sense, the term lacks any real conceptual meaning, but maintains deep emotional and moral meaning for those who have chosen to wage a moral battle over this particular issue.

Because of this, those who advocate for the regulation or censorship of action-oriented games may struggle to understand the moral rationale (or even scientific data) of those who oppose their efforts. This may explain why some advocates of the causal position have taken to referring to their opponents with derogatory terms such as "industry apologists" (Anderson, 2013; Rich, 2014) or even compare them to Holocaust deniers (Strasburger, Donnerstein, & Bushman, 2014). Such language is inappropriate, of course, and it is unfortunate such ad hominem has crept into the language of social science.

Nonetheless, many may wonder why the debates over video games have often been so heated and acrimonious. The answer, based on MFT, may simply be that different individuals are wired to perceive morality over a given issue very differently and it may be difficult for individuals who value different moral virtues to communicate in ways that are constructive. This may be lamentable, in the same vein as are taxes and inevitable death. Yet truth, such as it ever can be understood by the human enterprise, may be more likely to arise through the marketplace of ideas, the dissemination and critical examination of data and open debate (even that which is acrimonious) than could ever be hoped via conformity to a group collective for the convenience of collegiality.[2]

These issues of moral foundations, themselves having evolutionary roots, help us to see moral panics as an evolutionary process in which groups of individuals employ moral statements to assert dominance. Thus, the moralistic fallacy may be employed to assert that what is personally moral is also good (often using sciency language), with the implication that those who oppose the position are immoral and may be socially ostracized. Hence, debates over culture can be seen as dominance struggles between groups of individuals, and as such, the results of an evolutionary process.

Conclusion

Many individuals ask when we will ever have the answer on the issue of the video game debates. In truth, we now have over three decades of research in this area and, despite the efforts by some to "nail the coffin shut" (e.g., Huesmann, 2010), it is increasingly clear that video game effects research, like most social science research, is more mess than

objective truth. This is unlikely to change with future research, although movements toward open and replicable science do offer some hope. Taking the existing body of research at face value and, despite the valiant efforts by some to find effects, the absence of clarity is itself, most telling. Perhaps we have the answer already, and it is just a disappointing, muddled, and unsatisfying one.

Because of this, because the video game effects research field never managed to settle on clarity, it makes most sense to continue to view the video game debates as primarily moral, rather than scientific. An unfortunate feature of moral panics is that in catering to the fears of older adults, they tend to incentivize scientists to support those panics (Gauntlett, 2005), through newspaper headlines, grant funding, and prestige (at least in the short term). The controversial efforts of the APA in 2015 to assert the truthiness of video game effects, despite so much evidence and scholarly opinion to the contrary, can be understood in this light of morality, generational conflict, incentivized science, and myside bias (Stanovich, West, & Toplak, 2013).

Moral panic theory, then, provides both the promise for the solution to the current stand-off and also a warning. Fears of new media, being a feature mainly of older adults, tend to die out with those older adults. Thus, the video game moral panic is, arguably, already ebbing (if sustained somewhat by constant advances in technology, including the fore-coming virtual reality). It is unfortunate that professional guilds such as the APA staked so much of their reputation on beliefs that, like fears of Elvis Presley, Ozzy Osbourne and Harry Potter before, were rooted in moral combat rather than good science. We may be sanguine that the panic over video games must, by necessity, be temporary. This is true in light of increasing data that effects, particularly dramatic effects worthy of public health concern, do not exist. Nonetheless, moral panics tend to work in cycles. They can be explained via evolutionary psychology as an expected consequence over generational struggles regarding control of culture. On a more limited level, these generational squabbles may bubble over to researchers competing for limited research resources. But, given the power of evolution, this cycle may be difficult to escape from. We need to wait only until we ourselves are older enough to begin waving our metaphorical canes at whatever the kids will be up to then.

Notes

1 Hypodermic needle models, broadly speaking, are those that purport that media can inject behaviors into users through learning, often involving consumers as unwitting victims of media.
2 Of course, those high in valuing the concepts of authority and sanctity may disagree.

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