Inoculation Theory and Sport Communication

Josh Compton, Ph.D.

Dartmouth College

Suggested citation:

Compton, J. (2023). *Inoculation theory and sport communication*. Sport Communication Division of National Communication Association, National Harbor, MD.

Abstract

Inoculation theory is a classic theory of resistance to influence—an explanation for how positions can be made more resistant to future change through preexposure to weakened forms of impending threats. In this review and commentary, we survey the existing research in inoculation theory and sport communication, including its application as a sport public relations strategy and as a method to promote increased involvement in sport and physical activity. We then propose particularly promising directions for future research in inoculation theory and sport communication, including new advancements in sport public relations, unintended inoculation effects of sport, and potentially more effective ways of encouraging sport and physical activity participation.

Key words: sport public relations; sport marketing; fan studies; health promotion

Inoculation Theory and Sport Communication

Scholars have pointed out how apt it is that inoculation theory can be readily and effectively applied to health issues, since it is named after a health treatment (e.g., Compton & Pfau, 2005). Inoculation theory looks at how resistance to persuasion and other forms of influence can be conferred in ways similar to resistance to viruses; it is named and explained by a biological/medical process (Compton, 2013; McGuire, 1964). It makes sense, then, that a theory named for a process of health would find itself at home with health issues, and it has. Inoculation theory has—among other things—guided health campaigns in protecting kids against pressures to smoke cigarettes (Pfau et al., 1992) and drink alcohol (Godbold & Pfau, 2000), and college students against pressures to binge drink (Cornelis et al., 2014) and have unprotected sex (Parker et al., 2012). Perhaps most apt of all: Inoculation theory has guided effective campaigns to confer resistance to vaccination myths, dis- and misinformation (Wong, 2016; Wong & Harrison, 2014), supporting a pro-vaccination campaign strategy that predates the formal introduction of inoculation theory (see Compton & Kaylor, 2013).

Sport is another area that seems particularly apt for inoculation-informed applications and research. As Compton and Ivanov (2018) noted:

In many ways, inoculation theory is right at home in a conversation about sport, exercise, and physical activity. . . The way inoculation works . . . is in line with basic processes of body strengthening programs. Just as muscle builds through periods of failure and recovery, during attitudinal inoculation, an attitude (or a belief, behavior, or some other related construct) becomes stronger during periods of challenge and recovery. (p. 73)

Additionally, Compton (2016) has proposed that inoculation theory is particularly well-suited for sport communication in general. He argues that

sport communication is replete with areas in which inoculation theory might help—from practical benefits to teams, players, and fans to advancement of scholarship in sport public relations, sport marketing, and persuasion in sport. (p. 2)

And yet, despite calls for more attention to theory-driven work in sport in general (e.g., Paton, 1987) and to inoculation theory and sport communication research in particular (e.g., Compton, 2016; Compton & Ivanov, 2017), inoculation theory and sport has seen comparatively less development than health contexts in particular and other contexts in general. But what research does exist of inoculation theory and sport points to promising developments, and even more promising future opportunities.

In this review and commentary, we survey the existing work in inoculation theory and sport communication, including its application as a sport public relations strategy and as a way to promote increased involvement in sport and physical activity. We then propose several particularly promising directions for future research in inoculation theory and sport communication, including new advancements in sport public relations, unintended inoculation effects of sport, and potentially more effective ways of encouraging sport and physical activity participation.

Inoculation Theory

Inoculation theory offers an explanation for how a position can be made resistant to change (McGuire, 1964). It is named and explained by a medical analogy. A body can be made resistant to disease through preexposure to weakened forms of an impending challenge (e.g., an inactivated flu virus can motivate protection against future exposure to flu

virus). Similarly, a person can be made resistant persuasive attacks through preexposure to weakened forms of those persuasive arguments (e.g., a counterargument paired with refutations of that counterargument can motivate protection against future exposure to persuasive arguments; see Compton 2013; McGuire, 1964). Campaign designers can devise interventions to protect against unwanted persuasive effects across contexts—including health (Compton et al., 2016), politics (Compton & Ivanov, 2013), and public relations (Compton et al., 2021)—by pre-exposing message recipients to the types of challenges (e.g., counterarguments) they might later face. Of note, research confirms that raising and refuting a few challenges can protect against a range of challenges (Banas & Rains, 2010).

Some research has examined inoculation theory in the context of sport communication (see Compton & Ivanov, 2018) but as previously mentioned, such work is much less common compared with applied inoculation in other areas, like health and politics. We outline some extant work with inoculation theory and sport next, then follow with recommendations for further development of this important line of applied inoculation theory research.

Inoculation Theory and Sport Public Relations

Inoculation has been established as an effective public relations strategy in general (see Compton et al., 2021, for a review), and scholars have also looked at inoculation as a public relations strategy with sport public relations in particular. Hopwood (2010) has observed that sport marketing public relations (SMPR) warrants specific research, theorizing, and applied work since "sport in all its forms and permutations cannot be marketed or promoted in the same way as any other consumer commodity" (p. 56). She continued:

"SMPR is grounded in relationships and communication; sport marketing is grounded in monetary transactions and promotions" (Hopwood, 2010, p. 65).

In a series of studies, Compton and Compton have sketched out theoretical cases for inoculation's application to sport public relations, or "sport communication strategies that preemptively inoculate sport fans against challenges to their continuing support" (Compton, 2016, p. 1). Their work has referenced inoculation theory to inform their rhetorical analyses of image building and image repair efforts in sport, including open letters about concussion prevention efforts to fans from the National Football League (Compton & Compton, 2015); open letters to college sport fans from coaches and administrators to shore up their support during losing seasons (Compton & Compton, 2014) or difficult losses (Compton & Compton, 2022); open letters to a community after a controversial high school sport decision (Compton & Compton, 2017); and novel efforts to defend against criticism of unflattering depictions of an individual football player, Tom Brady (Compton & Compton, 2018). Other sport communication work has examined the Australian Football League's strategic inoculation strategy to promote its social responsibility to better engage fans (Gill, 2017). Just as inoculation theory has established itself as a robust public relations strategy in general (Compton et al., 2021), inoculation theory is establishing itself as especially wellsuited to sport public relations in particular: in most of these studies, inoculation is advanced as a way to take an existing, desirable position (e.g., fan support) and make it more resistant to future change (e.g., wavering in the face of a losing season).

Unintended Inoculation and Sport

Most applied inoculation theory work looks at inoculation as an intentional, strategic process of communication—a messaging strategy for campaigns (political, marketing, health,

and otherwise). Other work, however, as looked at unintended inoculation effects, including the possibilities that narratives (Compton & Mason, 2020) and humor (Compton, 2018) have inherent features that inoculate. Even without intention, a story that features two opposing forces (e.g., a protagonist and an antagonist) might function much like a counterargument and refutation in an inoculation message: generating threat and conferring resistance to future influence. Even without intention, a joke that offers a set up followed by a punchline might function much like a counterargument and refutation in an inoculation message: generating threat and conferring resistance to future influence.

Likewise, some considerations of inoculation theory and sport have considered unintended inoculation effects of sport. For example, Djedidi and Hani (2016) outlined how the inherent competitiveness of sport—consistent challenges against opponents, small trials, a sort of counterargument and refutation interplay—might have an inoculative effect on fans, since "it is this open publicized competition that makes it clear to the individual that choosing one [team] means confronting the other either openly or discretely" (p. 422). That is, the process of inoculation is inherent in sport: a counterargument (opponent) and refutation (favored team) in confrontation. If so, then sport may have an inoculation effect even without strategic intent. As with narrative (Compton & Mason, 2020) and humor (Compton, 2019), sport may have inherent inoculative features that warrant continued examination.

Inoculation and Participating in Sport

Other inoculation and sport research has assessed inoculation messaging as a means for encouraging participation in sport and physical activity. Dimmock et al. (2016) found that inoculation messaging could help thwart the monotony of boring exercise sessions led

by controlling instructors. When exercisers were prewarned about how the session might challenge their enjoyment of it and given strategies for working through their disinterest (i.e., counterarguments and refutations), they were more likely to enjoy the session and interpret support from the instructor. Activities in the circuit were sport-related, including skipping rope, jumping hurdles, and passing basketballs.

Jackson et al. (2017) tested inoculation as a way to help students work through their performance anxiety (in their study, public speaking performance). When speakers were prewarned about some of the reasons they might feel anxious about public speaking (e.g., that they might incorrectly assume the audience is hyper-critical of their speaking skills—a counterargument against their confidence) and given some more productive ways of interpreting these things (e.g., that most audiences are supportive—a refutation against the counterargument), they experienced less anxiety and interpreted remaining anxiety in a healthier way. They raise the possibility that a similar approach could help with other stressful performance situations, including sport competition.

Jackson et al. (2015) found that inoculation messaging could also protect perceptions of task self-efficacy related to physical activity—in their study, a balancing task—in the face of negative feedback. Those inoculated were also more focused on the task and less concerned about their self-presentation.

Behaviors (and even more commonly, behavioral intentions) have been commonly proposed outcomes for inoculation-based campaigns (see, for example, voting behavior, Pfau et al., 1990). Likewise, as this section has shown, we find behavioral outcomes of inoculation messaging in the context of sport communication, too.

Although it has been applied in comparably less often in a sport context than in other contexts, like politics and health, what research and theorizing we do have about

inoculation theory and sport suggests that inoculation might be ideally situated to function in sport. Scholars should build on the foundational work reviewed to this point and take inoculation theory into new directions with sport and sport communication. We propose some possibilities next.

Future Directions

More About Inoculation Theory and Sport Public Relations

To date, work with inoculation theory and sport public relations has looked mostly at public relations efforts to promote an individual team (e.g., Compton, 2016). Future work should explore other sources of sport public relations. For example, Xiao's (2020) analysis of eSports viewership (based on the theory of reasoned action (TRA) suggests that "[s]ports marketers can develop a multiplatform marketing campaign to lessen society's misunderstanding of video games and eSports" (p. 116). Although Xiao does not specifically propose an inoculation-based strategy, such an approach seems well suited; a strategic effort could be made to raise and refute the very misunderstanding(s) identified in Xiao's study.

More About Unintended Inoculation and Sport

As previously discussed, Djedidi and Hani (2016) contend that competitive sport has inherent features that might result in an inoculative effect—the pairing of opponents and favored teams, which seems to resemble in some conceptual ways the pairing of counterarguments with refutations. Future work should also consider other examples of inherent, unintended inoculation effects in sport.

One avenue of this type of work could explore unintended inoculation effects of sport media. Media frames of sport stories influence peoples' attitudes toward athletes and enjoyment of sport media (Lewis & Weaver, 2015). Might sport media frames also have an

inoculative effect? Such work could model the approach of Niederdeppe and colleagues (2015). Their work compared two different frames of health policy issues—narrative and inoculation—and they found that both can confer resistance to attacks on positions (Niederdeppe et al., 2015). Future work could also further assess a possibility raised by Lewis and Weaver (2015) that the emotional content of sport media about an athlete might influence how future negative information about an athlete is processed, which is in line with the timing of attitudinal inoculation.

A related area of inquiry could be to explore inoculative effects of sport narratives themselves (see Compton & Mason, 2020). With increased attention in sport media to the personal lives of athletes (Lewis & Weaver, 2015), narratives about athletes would seem to also be increasingly popular. Such work could explore, for example, how athletes telling stories of their experiences with mental illness could not only influence attitudes and behaviors about mental illness (Parrott et al., 2021), but also, perhaps even inoculate against future stigma.

More About Inoculation and Participating in Sport

Some research has looked at harnessing inoculation messages to promote sport and exercise participation. Future research should also explore effects of inoculation messaging on parents' decisions about sport participation of their children. Boneau and colleagues (2020) analyzed how parents make decisions about their children's participation in youth football, and found

[C]oaches and schools, primary information sources, generally painted football in a favorable light. There was zero evidence coaches or schools openly discussed CTE [chronic traumatic encephalopathy] and its links to tackle football. (p. 44)

Boneau and colleauges (2020) call for a more complete discussion. It would be interesting to assess whether such discussions—the raising and refuting of youth football arguments, either pro or con—would have an inoculation effect on some parents' attitudes. Compton and Craig (2019) have argued that family communication is particularly well suited for effective inoculation-based messaging.

Inoculation as/with Buffers

Some limited work has proposed inoculation as a viable public relations strategy for sport communication. Of course, inoculation need not be the sole strategy of bolstering image of sport organizations. For example, Koerber and Zabara (2017) contend that sport might have unique attributes that help mitigate image damage. They note that communities and political economy can act as "buffers," protecting sport organizations from attack. Inoculation and buffers can work in tandem. Additionally, it may well be that inoculation-based strategies can strengthen buffers. For example, some research suggests that inoculation messages motivate more talk and the issue along social networks (Ivanov et al., 2012). If such talk strengthens relationships, perhaps inoculation messages not only bolster resistance, but also, community—a buffer for image damage (Koerber & Zabara, 2017).

Inoculation and Other Sports

As with sport communication research in general, inoculation sport communication research has mostly examined inoculation's efficacy with conventional/traditional sports.

This leaves a number of un- and under-explored sports. As Benoit (2018) notes:

Sport appears in a myriad of guises, including track, swimming, diving, miniature golf, archery, tennis, rugby, billiards, boxing, badminton, bowling, cycling, sailing, gymnastics, rowing, racing (including automobile, motorcycle, ATV, boats, horse,

dog), pickleball, skateboarding, jujutsu, wrestling, handball, figure skating, squash, skiing (snow, water), roller derby, lacrosse, water polo, and bodybuilding. (p. 25)

Future inoculation theory research should examine inoculation theory's efficacy with less conventional sports, including those listed here by Benoit (2018) and beyond. Might inoculation-based messaging help to promote healthier body image in gymnastics—a sport that has been associated with particularly pronounced body image challenges (Zaccagni et al., 2019)? Could inoculation theory help combat unhealthy addiction to gambling associated with sport like horseracing (see Holtgraves, 2009), building off success in designing responsible gambling inoculation campaigns (e.g., Lemarié & Chebat, 2013)? These and other questions about un- and under-studied sport warrant consideration.

Therapeutic Inoculation and Sport Communication

Inoculation and sport research has not kept up with recent developments in inoculation theory. Consider, for example, Compton's (2016) claim that inoculation theory-informed messaging would be ineffective with dysfunctional fans, since inoculation must always be a preemptive, prophylactic intervention (i.e., before an undesirable position has formed). That might be true for prophylactic inoculation, which has been the guiding analogy for most of inoculation theory's development, but more recent research raises the possibility, and some support for, therapeutic inoculation: Inoculation interventions that "heal" an existing position and make it more resistant to future attacks (Compton, 2020). We could envision additional opportunities for therapeutic inoculation, including designing inoculation messages and/or strategic media framing to help correct stigmatized views of mental illness (see Parrott et al., 2021); sexist beliefs about women sport journalists (see Mudrick et al., 2016); dangerous beliefs about injuries (see Sanderson et al., 2014), including

concussions (see Sanderson et al., 2017); and limited understanding of disability and accessibility in sport (see Misener, 2013), as examples.

Conclusions

Of course, this review of inoculation and sport research is not exhaustive. Other inoculation research has tangential links (e.g., Pfau's, 1992, study of athletic shoe advertising; Scully et al.'s, 2017, examination of sports sponsorship of sugary beverages and alcohol; Laure et al.'s, 2009, assessment of inoculation-informed role playing games to confer resistance to performance enhancing drug prevention) and conceptual links (e.g., inoculation-based online games designed to confer resistance to misinformation, Roozenbeek & van der Linden, 2019; Saleh et al., 2021). This work, as well as inoculation theory research in general, should inform continuing work in inoculation theory and sport.

More than 100 years ago, James Winans (1915) observed in his classic communication text: "We study everything in these days; even sport" (p. 8). If the *we* here stands in for communication scholars—which Winans was (and indeed, he was one of the founding members of what is now the National Communication Association), then his statement continues to ring true. Sport communication continues to see unprecedented growth as a disciplinary focus of the communication discipline and beyond, and although its study through a lens of inoculation theory is relatively new, the potential seems limitless. At a minimum, it is a relationship worth exploring more.

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