Ritualized behavior in sport

Ritualized behavior in sport

Robin C. Jackson and Rich S. W. Masters

Institute of Human Performance, The University of Hong Kong, Hong Kong, SAR, China.

Abstract: We consider evidence for ritualized behavior in the sporting domain, noting that such behavior appears commonplace both before a competitive encounter and as part of pre-performance routines. The specific times when ritualized behaviors are displayed support the supposition that they provide temporary relief from pre-competition anxiety and act as thought suppressors in the moments preceding skill execution.

One domain in which a colorful raft of ritualized behaviors can be seen is sport. Superstitious behaviors are extremely common (Neil 1982) and many can be characterized as stereotyped, rigid, repetitive rituals, lacking in rational motivation. Performers may feel compelled to "gear up" in a particular order, to tie and retie their bootlaces, or to perform the same pattern of behavior each time they run onto the field of play.

Boyer & Lienard (B&L) explicitly contrast ritualized behavior with commonsense notions of rituals as actions that are performed routinely or without thinking. Ritualized behaviors are "recognizable by their stereotypy, rigidity, repetition, and apparent lack of rational motivation" (target article, sect. 1, para. 1), whereas routine actions are performed without thinking but with motivation. A defining feature of ritualized acts is that they do not seem to become automatic and remain subject to high-level cognitive

control. B&L further note that ritualized acts in obsessive-compulsive disorder may swamp working memory and appear to result in a temporary reprieve from what may be extremely debilitating state anxiety.

In sport, the outcome of a competitive event – and with it, the achievement of a status for which the performer will typically have invested many years and many thousands of hours of practice – often comes down to executing a skill successfully at a given moment. The resulting pressure leads many performers to "choke," or perform well below the level of which they are capable. There is considerable evidence that skill failure results from performers focusing on low-level units of behavior and, in particular, from attempting to exert conscious control over actions that normally "run off" automatically. Much evidence for this conscious processing hypothesis (Liao & Masters 2002; Masters 1992; Maxwellet al. 2003) has emanated from skills in which the performer has time to think prior to executing the skill (e.g., golf putting), but there is also evidence from reactive skills, such as baseball batting (Gray 2004). It may even be the case that conscious processing of one's movements, described by Masters et al. (1993) as "reinvestment," is potentially a mode of ritualistic intrusive thought that, hypothetically, may eventually mutate to become obsessive compulsive. Golfers with type II "yips," for example, are highly compulsive and analytical (Smith et al. 2003), and "what should be an automatic unified movement, becomes a complicated problem of consciously coordinating many separate movements" (Cochran & Stubbs 1968, p. 135).

One of the predictions generated by B&L's account is that ritualized behavior may be functional insofar as the temporary swamping of working memory prevents performers from "reinvesting" conscious control (Masters et al. 1993), as well as resulting in a temporary reduction in anxiety. Ritualized behaviors should be evident in abundance in the period immediately preceding a competitive encounter, as performers attempt to gain control of their emotions. They should also be present as "moderately efficient forms of *thought-suppression*" (target article, sect. 7.2, para. 2; emphasis in original) in the moments immediately before skill execution, particularly in self-paced skills. Consistent with these predictions, many performers do appear to engage in ritualistic behaviors before a competitive event (Neil 1982) and often include ritualistic elements in pre-performance routines (Foster et al. 2005).

There are also many examples of performers displaying ritualized behavior during breaks in competition. In tennis, Raphael Nadal takes great care to position and align his fluid replacement bottles at each change of ends, after drinking from both. Another top player, Justine Henin-Hardenne, reputedly avoids stepping on the lines on the court between points. While behavioral aspects of pre-performance routines, such as their timing, appear to be controlled at a sub-conscious level (Jackson 2003), performers often include conscious elements that may suppress conscious control processes. For example, Foster et al. (2005) showed, in a study of superstitious behavior in basketball free-throws, that some of the behaviors players felt compelled to perform included tapping their head three times before shooting, and touching their heels alternately before each throw.

As well as displaying the characteristics of compulsion and rigidity, other activities also appear consistent with the concept of goal demotion. A golfer clearly needs to grip the club correctly but when the player ritually re-grips the club a set number of times, the behavior becomes divorced from the observable goal. Indeed, this type of behavior sometimes appears similar to that of obsessive-compulsive "checkers." Golfers may be aware that re-gripping the club over and over is unnecessary but feel they have little control over their behavior. Similarly, while it would appear eminently sensible to look at the golf ball when preparing to putt, focusing intently on each letter of the manufacturer's name is not a necessity, though it may well be an effective way to suppress anxiety provoking or performance disruptive thoughts. Indeed, B&L suggest that patients may intuitively produce behaviors that reduce anxiety, and Neil (1982) has argued that superstitious behavior provides a means by which performers can cope with the stress of competition under pressure.

Although much of the evidence is anecdotal, there appear to be many examples of ritualized behavior in sport that are consistent with B&L's account. Sporting competition heightens anxiety, and skill failure often results from attempting to consciously control actions. Pre-competition ritualized behaviors may provide temporary relief from heightened anxiety while ritualized elements of pre-performance routines may help prevent the performer from "reinvesting" conscious control of the skill itself, a process that is implicated in "choking" or skill failure under pressure.

References

Cochran, A. & Stubbs, J. (1968) *The search for the perfect swing*. Heinemann.

Foster, D. J., Weigand, D. A. & Baines, D. (2005) The effect of removing superstitious behavior and introducing a pre-performance routine on basketball free-throw performance. *Journal of Applied Sport Psychology* 18:82–86.

Gray, R. (2004) Attending to the execution of a complex sensorimotor skill: Expertise differences, choking, and slumps. *Journal of Experimental Psychology: Applied* 10:42–54.

Jackson, R. C. (2003) Preperformance routine consistency: Temporal analysis of goal kicking in the Rugby Union World Cup. *Journal of Sports Sciences* 21:803–14.

Liao, C. & R. S. W. Masters (2002) Self-focused attention and performance failure under psychological stress. *Journal of Sport and Exercise Psychology* 24:289–305.

Masters, R. S. W. (1992). Knowledge, knerves and know-how: The role of explicit versus implicit knowledge in the breakdown of a complex motor skill under pressure. *British Journal of Psychology* 83:343–58.

Masters, R. S. W., Polman, R. C. J. & Hammond, N. V. (1993) Reinvestment: A dimension of personality implicated in skill breakdown under pressure. *Personality and Individual Differences* 14:655–66.

Maxwell, J. P., Masters, R. S. W. & Eves, F. F. (2003) The role of working memory in motor learning and performance. *Consciousness and Cognition* 12:376–402.

Neil, G. I. (1982) Demystifying sport superstition. *International Review of Sport Sociology* 17:99–124.

Smith, A. M., Adler, C. H., Crews, D., Wharen, R. E., Laskowski, E. R., Barnes, K., Valone Bell, C., Pelz, D., Brennan, R. D., Smith, J., Sorenson, M. C. & Kaufman, K. R. (2003) The “yips” in golf: A continuum between a focal dystonia and choking. *Sports Medicine* 33:13–31.