

Base rates and runs as cues to allocation in team sports.

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In the research on the hot hand belief in sports, for example, the belief that success is more likely for a player if it is preceded by success than if it is preceded by misses, two contrasting views can be found in the literature. On the one hand the content of the belief is understood as a misperception of actually random sequences (Gilovich, Vallone & Tversky, 1985) and thus regarded as a fallacy and as an example of the irrationality of human cognition. On the other hand it has been recently suggested that the hot hand belief is adaptive since it may help team players to organize ball allocation optimally (Burns, 2004).

Three studies will be presented to provide empirical evidence that information on runs influences allocation behavior and showing that information on base rates and sequential structure of athletes performance in volleyball serve as cues for allocation decisions when separated experimentally (Raab, Gula & Gigerenzer, in preparation). In a simulated volleyball game subjects allocated the ball more often to offensive players with longer runs than to players with shorter runs. However, this allocation pattern was found when an offensive player had a higher base rate (adaptive use of information on runs) and also when the offensive player actually had a lower base rate (non-adaptive use). In an analysis of a data base of German professional male volleyball players, overall streakiness and fluctuation in offensive performance of players was found, suggesting that the belief in the hot hand may be rational in volleyball. The outline of a Brunswikian lens model will be suggested as a more adequate theoretical framework for studying the ecological rationality of the hot hand belief.

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