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# Heuristic Reasoning and Sport Observers: Exploring the influence of Example-Availability on Ad-Hoc Frequency Judgments



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**Introduction:** When performing everyday reasoning tasks 'on-the-fly', individuals rarely attempt a comprehensive examination of all relevant resources from social memory. More commonly, metacognitive 'short-cutting' strategies – judgemental heuristics – are employed to expedite these tasks. The most robustly demonstrated 'heuristic' is the *availability* heuristic (Tversky and Kahneman 1973; 1974). This heuristic, describes the manner in which estimations of frequency or probability tend to be inducted from the information most cognitively salient to an individual, i.e. task-relevant examples that can be *easily recalled* have a disproportionately high frequency/probability estimation. Incorporating 'fame availability' (Mekelvie 1997) the empirical focus of the study was on the 'snap judgements' made by observers of sport images.

**Methods:** Subjects (n=141) were shown a variety (50) of images of football, tennis, golf, netball, running athletes in action from the public domain. Images were grouped and divided into celebrity (high profile professional athletes in football, tennis, golf) and non-celebrity (low profile recreation athletes participating in netball and running). In a time-pressured environment, participants estimated the frequency of images observed for each sport. The scores of the five sports, consisting the two groups were averaged to provide a single participant value for celebrity and non-celebrity sports.

**Results:** Normality of data was checked using Kolmogorov-Smirnoff and subsequently confirmed. A paired t-test was used to examine for difference between the two groups. Frequency scores for celebrity sports ( $12.0 \pm 3.3$  times) were significantly more ( $t_{136} = 7.394$ ,  $P = 0.001$ ) than non-celebrity sports ( $9.9 \pm 3.3$  times).

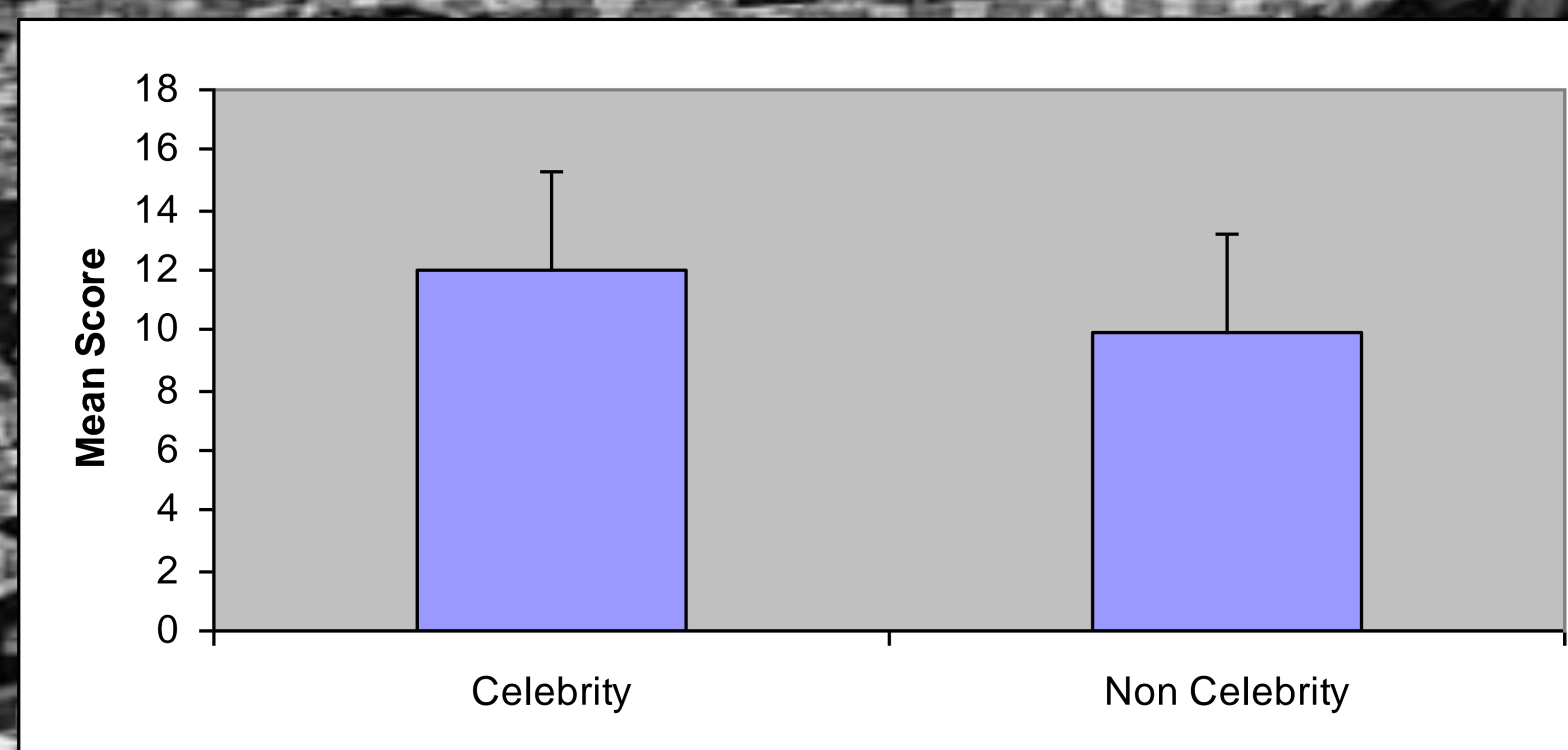


Fig. 1. Mean scores of celebrity and non-celebrity

## Discussion:

Heuristics are an adaptive tool (Gigerenzer, 2006) which have the potential to produce effective on-the-spot judgements. However these results suggest that significant distortions of frequency may arise through the influence of heuristics when observing sport from the periphery. Given the contextual ambiguity influencing those centrally involved in sport (coaches, referees, participants, commentators) and the importance of decision-making under time constraints, further research on the influence of heuristics in the decision making of sport practitioners is recommended.

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