

Commentary on T. Yarkoni (2020) The Generalizability Crisis.

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Impact on the Legal System of the Generalizability Crisis in Psychology

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## **Abstract**

Overgeneralizations by psychologists of the research evidence on memory and eyewitness testimony, such as “memory decays with time” or “memories are fluid and malleable”, are beginning to appear in legal judgements and guidance documents, accompanied by unwarranted disparagement of lay beliefs about memory. These overgeneralizations could have significant adverse consequences for the conduct of civil and criminal law.

The generalizability crisis so ably articulated by Yarkoni can lead to particularly unfortunate consequences in applied fields such as the law. Some of the most egregious examples of this occur in the fields of memory and eyewitness testimony. General statements are made asserting that lay opinions about memory, including those of jurors and lawyers, are frequently in error (Berkowitz & Frenda, 2018; Clifasefi et al., 2007; Lynn et al., 2015). Memory is claimed to be error-prone or unreliable without the qualification that it may be accurate under other conditions (Lynn & Payne, 1997; Zajac et al., 2013). Some psychologists refer to ‘laws’ of memory (Howe, 2013), even though memory phenomena are known to be highly dependent on such factors as who the participants are, the conditions present at encoding, what is being recalled, the encoding conditions, and how memory is assessed (Roediger, 2008). Such overgeneralizations can then become incorporated in legal and judicial documents.

The general public is supposed to think that memory involves playing back events exactly as they happened, literally “like a video camera” (Lacy & Stark, 2013; Lilienfeld et al., 2010). This often repeated, but false, assertion involves generalization from responses to single survey questions such as “Human memory works like a video camera, accurately recording the events we see and hear so that we can review and inspect them later” (Simons & Chabris, 2011). In fact most people do experience some memories, particularly those involving important events, as a connected series of scenes rather like a videotape. Simply asking additional questions reveals that memory beliefs are much more nuanced than this and people are well aware that their recollection is not always reliable (Brewin et al., 2019). However, the idea that the public had mistaken ideas about memory led to the state of New Jersey instructing jurors that “Research has shown that human memory is not at all like a video recording that a witness need only replay to remember what happened. Human memory is far

more complex” (New Jersey Courts, 2020). The danger here is that testimony could be discounted purely on the basis that the witness described their memory as “like a video recording”, when this statement did not at all imply a naïve or mistaken view of memory.

For many years eyewitness confidence was thought to be only weakly related to accuracy, but this conclusion was overturned when techniques for analyzing the question were improved (Wixted & Wells, 2017). Eyewitness confidence is not a guarantee of accuracy, but is very highly related to accuracy when memory is uncontaminated and suitable interviewing procedures are used (Wixted et al., 2018). However, the inappropriate generalization had already been incorporated into compulsory jury guidance issued by the Supreme Court of New Jersey (<http://www.judiciary.state.nj.us/pressrel/2012/pr120719a.htm>) for cases involving eyewitness identification, which stated “Although some research has found that highly confident witnesses are more likely to make accurate identifications, eyewitness confidence is generally an unreliable indicator of accuracy” (p. 4).

Witnesses have often been impugned by claims that memory is unreliable, for example invoking research on ‘false memory’ (Brewin et al., 2020; Wade et al., 2018; Wixted et al., 2018). This term is applied to several different experimental paradigms such as associative illusions (the Deese-Roediger-McDermott paradigm), manipulating memory for detail by providing misleading post-event information, artificially inflating the perceived likelihood that a non-remembered event occurred, and implanting memories for childhood events that never happened. Implications for the legal system are then discussed without distinguishing between these very different paradigms, and without recognition that there is no overall proclivity to experience all types of false memory (Lacy & Stark, 2013). The fact that

memory can be manipulated in the laboratory is important but does not by itself allow of any conclusion about how reliable memory is under normal, real life circumstances. Despite this, some organizations have endorsed statements such as “Science shows that the memory of an honest witness who gives evidence in international arbitration proceedings can easily become distorted” (International Chamber of Commerce, 2020).

Similarly, it is sometimes suggested on the basis of memory implantation research that it is relatively simple to create false memories (Conway, 2012). This overgeneralization overlooks the special procedures that are used, including at times a high degree of deception, and the fact that only a small minority of participants may succumb to them. Little is known about the durability of the effects or whether they are associated with the degree of conviction necessary to sustain legal procedures such as cross-examination (Brewin & Andrews, 2017).

Overgeneralizations also occur when defence experts comment on contemporary witnesses reporting historic crimes. The simple idea that “memory decays with time” is sometimes put forward, without acknowledgment that most studies involved meaningless experimental materials and that there are numerous counter-examples (Roediger, 2008). Moreover, the claim does not make clear that with significant personal experiences initial decay in the total amount recalled typically plateaus, resulting in stable and largely accurate long-term recall of the remainder (Diamond et al., 2020; Hirst et al., 2015). Despite this, the compulsory jury guidance referenced above contained the generalisation: “Memories fade with time...In other words, the more time that passes, the greater the possibility that a witness’s memory of a perpetrator will weaken” (p. 5).

In 2013 a U.K. judge, Mr. Justice Leggatt, commented “Psychological research has demonstrated that memories are fluid and malleable, being constantly rewritten whenever they are retrieved” (EWHC 3560 (Comm); Case No. 2011 Folio 1267). A person would be in error to suppose: that the stronger and more vivid is our feeling or experience of recollection, the more likely the recollection is to be accurate”. These statements do not accurately reflect a complex literature, and fail to take into account the number of times an event happens, its importance, and memory rehearsal, whether deliberate or spontaneous. Legal professionals are not in a position to know that these are overgeneralizations. Psychologists, as Yarkoni has demonstrated, are the ones who are responsible and this can have serious consequences when their statements are repeated in the real world.

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