Do we believe in experts? The power of any view

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Abstract

This paper examines whether source credibility (whether advice is from an expert or novice source) influences judgments, and moderates the impact of orthodoxy (degree of typicality) on belief change (extent to which decision makers alter judgments). 109 members of the public completed a questionnaire involving an investigation into a series of child sex offenses. Participants were asked to read a description of offenses and then to i) numerically estimate the guilt of two suspect descriptions (orthodox vs. unorthodox), and following the presentation of an offender profile (matching either the orthodox / unorthodox suspect and provided by either an expert / novice source), to ii) reevaluate their guilt judgments for both suspects. Results revealed two key findings. First, in support of previous research, offender profiles were found to significantly alter judgments of suspect guilt in line with the content of the profile description. Second, source credibility had no significant impact on belief change and did not moderate the impact of profile orthodoxy on belief change. Thus, decision makers were equally willing to alter their judgments regardless of whether the information was from an expert or novice source and contained orthodox or unorthodox information. The implications of these findings for police and jurors are discussed.

Keywords: Experts; Decision-making; Offender profiling; Source credibility

Organizations often create subgroups of expert advisors to assist decision makers with framing problems in new ways (Schotter, 2003), enabling them to obtain unique information and perspectives (Phillips, Mannix, Neale, & Gruenfeld, 2004) that can improve decision accuracy (Johnson, Budescu, & Wallsten, 2001), reduce decision biases (Yaniv, 2004), and increase decision confidence (Van Swol & Sniezek, 2005). Expert advice serves as a source of information (Budescu & Rantilla, 2000) that can be very influential in decision processes (Steginga, Pinnock, Gardner, & Dunn, 2002), especially when decisions are important (Harvey & Fischer, 1997). Although the success of any decision is dependent on the quality of information evaluated (Kray & Galinsky, 2003), not all advice may be of a high quality (Waring, Alison, Cunningham, & Whitfield, 2013). Identifying factors that affect the influence of advice poses implications for improving decision quality.

One particularly high stakes environment in which expert advice has been shown to be influential is offender profiling in criminal investigations (Alison et al., 2012; Marshall & Alison, 2007). Offender profiling refers to the process of deriving an offender's likely characteristics from the way in which a crime was committed (Blau, 1994) and there are two approaches to this process: traditional and contemporary (Alison, 2005). The former, deriving from the principles of trait personality theory (Allport, 1937), is argued to lack empirical support (Kocsis, Cooksey, & Irwin, 2002) and often contains ambiguous and unsubstantiated statements that can steer criminal investigations in inappropriate directions (Alison, Smith, Eastman, & Rainbow, 2003a).

In contrast, the latter is evidence driven (Canter & Youngs, 2009) and advocates clearly structuring reports so that statements can be scrutinized in terms of strength of support (Alison, Smith, & Morgan, 2003b). Accordingly, the UK has shifted toward contemporary styles of profiling (Alison, McLean, & Almond, 2007).

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However, traditional profiling is still frequently used in many countries, despite evidence indicating the value of the contemporary approach for improving advice quality (Alison et al., 2003b). Given that not all profiling advice is evidence driven and that such advice has the potential to steer the direction of criminal investigations, the issue of what factors affect its influence over judgments of suspect guilt is of great importance. Evidence suggests that offender profiles are particularly influential when unorthodox (atypical) and incongruent (dissimilar to the judge’s opinion; Alison et al., 2012). However, research is required to establish whether the reason that such advice is influential is due to the perceived expertise of the source. Accordingly, we advance the research of Alison et al. (2012) by examining the impact of source credibility (whether or not the advisor is an expert) on advice influence (the extent to which decision makers alter their judgments of suspect guilt). In line with expertise research, we argue that source credibility will have a significant impact on advice influence.

Source credibility and orthodoxy

The term ‘source credibility’ is used here to refer to the level of experience an advisor possesses. In particular, we distinguish between advice that is either provided by an expert or a novice (in this context, a professor versus a student). Research demonstrates that decision makers do not view all advice to be equally valuable (Yaniv & Kleinberger, 2000), and that expertise is one factor to affect this assessment of advice worth. Within the literature on persuasion, research demonstrates that source expertise influences the formation of judgments and decisions (Bohner, Ruder, & Erb, 2002). Credible advisors are much more persuasive in changing decision makers’ opinions than less credible advisors (Sparks & Rapp, 2011), even when expert opinions conflict with the decision maker’s original perspective (Bochner & Insko, 1966).

The ability for expert advice to implicitly alter attitudes, referred to as the expert heuristic (Klucharev, Smidts, & Fernández, 2008), may be explained by dual process models. These models argue that information is either processed in an effortful and systematic manner with attention focused on the content of the message, or following a set of established heuristics that rely on simple adaptable rules to reduce the need for systematically processing information (Reimer, Mata, & Stoecklin, 2004). Persuasion research indicates that decision makers prefer to rely on simplifying heuristic cues rather than investing time and effort into evaluating a message (Eagly & Chaiken, 1984). Source credibility and expertise have been found to act as heuristic cues across many areas including leadership (Mugny, Tafani, Falomir, et al., 2000), eye witness testimony (Spellman & Tenney, 2010), and communication (Bochner & Insko, 1966). Overall, research demonstrates that experts have a much greater influence over decision processes than novices (Jungermann & Fischer, 2005).

Advancing on the research of Alison et al. (2012), we argue that source credibility moderates the influence of advice orthodoxy on belief change. The findings of Alison et al’s (2012) study demonstrated that the orthodoxy (how stereotypical and congruent (the extent to which advice matches the decision maker’s original opinion) of profiling advice affects how influential it is in altering judgments of suspect guilt. In particular, when a profile is unorthodox, the similarity between the profile and decision maker’s beliefs significantly alters guilt judgments. However, when the profile is orthodox, advice similarity has no significant impact on guilt judgments. This research found that overall, profiling advice is most influential when unorthodox and incongruent. We argue that whether orthodox or unorthodox advice is most influential will depend on how credible the source is.

Within the advice literature, research indicates that people tend to prefer advice that matches their preferences rather than advice that conflicts (Frey, Schulz-Hardt, & Stahlberg, 1996). This is referred to as “confirmation bias”, a tendency to seek out information that supports personal preferences whilst ignoring information that opposes them (Schulz-Hardt, Frey, Lüthgens, & Moscovici, 2000). However, research also demonstrates that decision makers prefer to seek advice that provides new and unique information rather than advice that does not contain additional information (Van Swol & Ludutsky, 2007). This unique advice is judged to be both more important and more influential. These two findings may seem to be at odds with one another given that any new information provided by an advisor has the potential to conflict with previously held preferences.

In order to reconcile these disparities, we argue that source credibility moderates the impact of orthodoxy on belief change. Accordingly, when advice originates from a novice source, orthodox advice will be most influential as decision makers will be reluctant to rely on non-stereotypical information due to the low credibility of the source.
However, when advice originates from an expert source, unorthodox advice will be most influential due to decision makers perceiving the source to possess greater expertise and therefore being willing to accept the non-stereotypical information.

**Method**

**Participants**

Using opportunity and snowball sampling, 109 participants were recruited from the general public. Overall, 35% (n=38) of the sample were male and 65% (n=71) were female, with an age range of 18-69 and a median age of 21 years.

**Design and procedure**

A 2-within (orthodoxy: orthodox suspect / unorthodox suspect) 2-between (profile type: orthodox profile / unorthodox profile), 2-between (author: expert / novice) 2-within (time: pre profile / post profile) mixed design was used. The dependent variable was the participants' perceived probability that the suspect was guilty. The questionnaire and procedure were adapted from that used by Marshall and Alison (2007) and Alison et al. (2012). All participants were told that the study was entirely voluntary and involved a discussion of a series of sexual assaults against young girls. They were advised that, should the material cause any discomfort or distress, they were not obliged to take any further part in the study. It was also explained that all their responses would remain confidential, anonymous, and that their answers would not be identifiable. Upon consenting to take part in the study, participants were then asked to imagine that they were a Senior Investigating Officer in charge of investigating this series of offenses. They were presented with background information on a series of sexual offenses against children followed by details of two possible suspects (Orthodox and Unorthodox).

At this stage (Time 1-Pre profile), participants were asked to estimate the probability that each suspect was guilty of the series of offences. Probability judgments were recorded on a scale ranging from 0% ('absolutely no chance that he is guilty') to 100% ('it is absolutely certain that he is guilty'). The participants were then presented with one of four profiles (Time 2-Post profile): 1) Orthodox profile written by an Expert; 2) Orthodox profile written by a Novice; 3) Unorthodox profile written by an Expert; and 4) Unorthodox profile written by a Novice. All were then asked once more to estimate each of the two suspects' probability of guilt. Participants were then debriefed and the objectives of the questionnaire were explained.

**Materials**

The materials were taken from Marshall and Alison (2007) and involved a scenario that represented a series of sex offenses against children.

**Background information**

Each questionnaire began with a description of the offenses and a brief physical description of the assailant as reported by the victims. The offender's Modus operandi was then outlined, including the offender's behavior during the assaults, level of violence involved, and nature of the sexual acts (see Marshall & Alison, 2007, for complete background information).

**Suspect information**

Participants were presented with two suspect descriptions. The orthodox suspect was designed by Marshall and Alison (2007) to be congruent with the orthodox 'prototype' child molester described in the literature. This suspect was described as a 44-year-old male, unemployed, and having had only one previous girlfriend. In contrast, the unorthodox suspect was designed to be at odds with this, while remaining plausible in view of the statistics for this kind of offender. This suspect was therefore described as a socially stable, 26-year-old married male working in a postal sorting office. Care was taken to maintain evidential consistency between the suspects.

Therefore, the physical appearance of both suspects was consistent with the victims' physical description of the assailant. For both suspects, participants were also told that they had been identified following the broadcast of an E-FIT, they owned a pornography collection and lived locally (see Marshall & Alison 2007 for a full comparison between the characteristics of the two suspects).
Offender profiles

Participants were presented with one of two offender profile descriptions. The details of the profile consisted of the sort of statements in so-called ‘traditional trait-based profiles’ (Alison, McLean, & Almond, 2007). The orthodox profile was designed to be congruent with the orthodox suspect’s description and included claims such as “the offender will usually be sexually inexperienced or sexually inadequate”. The unorthodox profile was designed to be congruent with the description of the unorthodox suspect, including claims such as “the offender will be sexually exploratory”. Both profiles predicted that the offender will live locally and own a pornography collection (see Marshall & Alison, 2007, for a detailed comparison between the orthodox and unorthodox profile).

Author of the offender profile

The offender profiles received by the participants were written by two different authors (Expert / Novice). Half of the sample received an offender profile which they were told had been written by Professor Paul Steven, who “works as a lecturer at the University of Liverpool and was asked to assist the police in creating an offender profile, which he thought was suitable for this series of sexual assaults”. They were told that Professor Stevens had 20 years previous experience in this field, both as an academic and a practitioner assisting the police. The remaining half of the sample received an offender profile which they were told had been written by an MSc student who “is currently studying at the University of Liverpool and was asked to create an offender profile which she thought was suitable for this series of sexual assaults”. They were told that this student did not have any direct experience of creating offender profiles for the police. However, she was currently studying forensic psychology.

Data preparation and analysis

Due to the distribution of the guilt ratings these variables were log transformed so that they met parametric assumptions. All ANOVA analyses are conducted on the log transformed data. Planned comparisons using t-tests were conducted on significant main effects and interactions; descriptive statistics (Mean ±SD) given in the presentation of planned comparisons refer to the log transformed data. If Levene’s test for equality of variances was violated then t-test results were confirmed with non-parametric tests.

Results

Post-profile: Analysis of the guilt ratings pre and post-profile - main effects and interactions between defendant orthodoxy, author and profile type.

Guilt ratings for the suspects were analysed using a mixed design ANOVA, with within subjects factors of suspect orthodoxy (orthodox, unorthodox) and time (pre-profile, post-profile), and between subjects factors of profile type (orthodox, unorthodox) and author (student, professor). There was a significant main effect of suspect orthodoxy on perceived guilt (F(1,105)=9.92, p=.002, \( \eta^2_p = 0.086 \)). This was the result of perceptions of guilt for the orthodox suspect (3.39 ±0.48) being higher than that of the unorthodox suspect (3.16 ±0.56). There was also a significant main effect of time, (F(1,105)=15.30, p<.001, \( \eta^2_p = 0.13 \)); as overall guilt ratings (collapsed across both suspects) declined from time one (3.34 ±0.33) to time two (3.21 ±0.36). This finding is a product of participants assigning more definitive guilt to the suspect that is congruent to the profile they were given and reducing guilt perceptions in the incongruent suspect, which consequently reduces overall perceptions of guilt assigned. There was no evidence for significant main effect of profile (F(1,105)=0.25, p>.1, \( \eta^2_p = 0.002 \)), or author (F(1,105)=1.034, p>.1, \( \eta^2_p = 0.010 \)).

As expected, no significant two-way interactions were found for time and profile (F(1,105)=2.24, p>.1, \( \eta^2_p = 0.02 \)), time and author (F(1,105)=0.40, p>.1, \( \eta^2_p = 0.000 \)), time and suspect orthodoxy (F(1,105)=0.69, p>.1, \( \eta^2_p = 0.007 \)), suspect orthodoxy and author (F(1,105)=3.43, p=.067, \( \eta^2_p = 0.032 \)) or profile and time (F(1,105)=0.23, p>.1, \( \eta^2_p = 0.000 \)). There was however the predicted suspect orthodoxy by profile interaction (F(1,105)=67.30, p<.001, \( \eta^2_p = 0.391 \)), although this was carried by the effect of the profile on time two guilt ratings described below.
Fig 1: Graphs showing the effect of the profile on perceived guilt of orthodox and unorthodox suspects. Effects shown separately for participants given the unorthodox profile (panel 1) and orthodox profile (panel 2).

Panel 1: Unorthodox

Panel 2: Orthodox

In direct replication of Alison et al. (2012), there was the significant three way interaction between time, suspect orthodoxy and profile ($F(1,105)=7.40$, $p < .001$, $\eta^2_p = 0.591$). The presentation of the orthodox profile resulted in significant decreases in guilt rating for the unorthodox suspect from time one (1.62 ±0.25) to time two (1.28 ±0.45; $t(56) = 5.99$, $p < .001$) and increases in guilt for the orthodox suspect from time one (1.74 ±0.25) to time two (1.89 ±0.12; $t(56) = -5.56$, $p < .001$). Similarly, the presentation of an unorthodox profile caused significant increases in guilt for the unorthodox suspect from time one (1.61 ±0.23) to time two (1.84 ±.15; $t(51) = -8.59$, $p < 0.001$) and a concurrent decrease in guilt ratings for the orthodox suspect from time one (1.72 ±0.24) to time two (1.41 ±.31; $t(51) = 8.99$, $p < .001$; see Figure 1). Significantly, there was no four way interaction between time, suspect, profile and author ($F(1,105)=1.08$, $p = .30$, $\eta^2_p = 0.010$). Taken together this suggests that although the contents of the profile are hugely influential on assigning guilt to participants, this effect occurs regardless of the expertise of the author.
Discussion

The aim of this paper was to examine whether source credibility directly impacted on belief change, and whether it mediated the impact of orthodoxy on belief change. We argued that profiles provided by an expert source would be more influential than from a novice source. We further argued that when originating from an expert source, unorthodox profiles would be most influential, whereas orthodox profiles would be most influential from a novice source. Findings showed that participants assigned significantly more guilt to the orthodox suspect than to the unorthodox suspect, supporting the existence of a typical stereotype of child sex offenders (Marshall & Alison, 2007). Offender profiles significantly altered participants’ judgments of suspect guilt; guilt judgments significantly increased for the orthodox suspect when participants received an orthodox profile and significantly increased for the unorthodox suspect when participants received an unorthodox profile. Contrary to expectations, source credibility had no significant impact on advice influence and did not moderate the impact of orthodoxy on belief change. The implications of these findings are discussed below.

The finding that offender profiles caused participants to significantly shift their judgments of suspect guilt in line with the message of the profile is congruent with previous studies conducted within this field (Alison et al., 2012; Marshall & Alison, 2007). Collectively, these findings demonstrate that offender profiles are highly influential in altering judgments of suspect guilt. Within the present study, there was no significant difference in the amount of guilt assigned by participants who received the orthodox or unorthodox profiles. However, the profile did cause participants to revise where they assigned this guilt. Accordingly, in addition to increasing judgments of guilt for the suspect matching the profile received, participants also significantly reduced the guilt assigned to the suspect who did not match the profile.

These findings pose implications for two aspects of the criminal justice system. First, there is the potential for offender profiles to alter police decisions regarding the prioritization of resources and judgments relating to arrest and charge during criminal investigations. Second, offender profiles may affect jurors’ judgments of suspect guilt within criminal courts. Although offender profiles are not admissible within UK courts, profilers are admissible as expert witnesses in some courts around the world, including the USA. It is worth noting that the profiles provided in this study were reflective of the traditional style of profiling in which statements made were vague and unsubstantiated (Alison et al., 2003a). Whilst the present participant sample consisted of members of the public rather than serving police officers, the previous study by Alison et al. (2012) contained a mixture of officers and members of the public and found no significant difference in the influence of profiles on judgments of suspect guilt between these two groups. Together, these findings indicate the potential for officers and jurors alike to be influenced by unsubstantiated statements.

Alison et al. (2012) and Marshall and Alison (2007) previously suggested that a potential reason for the significant influence of unsubstantiated profiles on judgments of guilt was the expertise of the profile source. A vast body of research into the expertise heuristic demonstrates that expert sources have a greater influence over judgments and decisions than novice sources (Jungermann & Fischer, 2005; Sparks & Rapp, 2011). However, contrary to this previous body of research, we found no significant difference in the influence of profiles provided by an expert source compared to a novice source.

Thus, participants were equally willing to be influenced by unsubstantiated information provided by both experts and novices alike. Further, counter to arguments that expertise would affect the impact of profile orthodoxy on influence; there was no significant difference in the influence of orthodox and unorthodox profiles provided by expert or novice sources. Participants were equally willing to be influenced by typical and atypical information, regardless of source credibility. It is possible that willingness to take any advice regardless of source credibility may be due to unfamiliarity with the situation. It is unlikely that participants within the current sample had previous direct experience of attempting to derive the guilt of a sex offender and so the situation would be novel. Accordingly, participants were unlikely to have developed heuristics for addressing this situation, making them willing to be guided by any form of advice. It is possible that if the situation was one in which participants possessed some experience (e.g. financial decisions) then they would be more discriminative of the credibility of the source of advice.
However, further research is required to identify whether the novelty of the situation affects criticality in assessing the value of advice provided. Overall these findings highlight that it is not the perceived expertise of the profiler that causes participants to alter their judgments. Further research is required to identify factors that cause offender profiles to be so influential. It is unlikely that confirmation bias would explain these results as participants’ judgments of suspect guilt were influenced by both orthodox and unorthodox profiles, rather than just profiles that were congruous with their original beliefs. However, as the current sample did not contain police officers, it would be beneficial for future studies to identify whether source credibility is as equally irrelevant to police officers as it is to members of the public. As police officers possess a greater level of experience in judging suspect guilt than members of the public, it may be that they are more discriminative of the credibility of the source of such advice. But given the importance of decisions made by police officers and jurors alike, current findings highlight the necessity of drawing attention to the need for criticality to officers and jurors when evaluating the quality of advice provided. It may be that officers and jurors require training in developing these skills. Findings also highlight the need to ensure that profiles are clearly structured and that statements are supported by evidence to allow officers to judge the veracity and strength of such advice.

References


