



Response

Response to Lindsay, Mansour, Beaudry, Leach and Bertrand's 'Sequential lineup presentation: Patterns and policy'

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This paper is a response to the earlier paper by Lindsay, Mansour, Beaudry, Leach and Bertrand (2009). We argue that eyewitness research is an important public good and that high-quality in research and policy formulations offered to the public interest is required to maintain our standing of trust. We argue that even though sequential lineups have been successfully codified in some jurisdictions as the exclusive eyewitness identification procedure, the claim of sequential superiority is built upon errors in the research process and that the evidence of reduced false identification with sequential lineups is completely offset by reductions in correct identifications. We reject the idea that the loss of correct identifications can be dismissed as guessing on the basis that this is speculative and that there is no published empirical support for the idea. We reject the idea that false identifications are necessarily more valuable for society to reduce than are correct identifications to achieve. Improvements in eyewitness identification are important, and interesting lines of investigation are available. It is questionable whether the sequential lineup is important among them.

Eyewitness research is an important public good. It improves criminal justice procedure, and increases understanding of factors leading honest but mistaken eyewitnesses to identify innocent people, or fail to identify guilty people. It has had specific impacts on the criminal justice system in the United States, and other countries. This contribution is recognized at the highest levels of legal administration. Our science is sought after, and we need to keep it that way by ensuring that our claims are properly substantiated and vouchsafed by diligent and reverent adherence to scientific protocols.

One claim that is not substantiated, and not on a rigorous scientific footing, is the claim that the Lindsay-Wells sequential lineup is superior to the traditional police lineup.

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This claim, repeated in the present volume by Lindsay, Mansour, Beaudry, Leach and Bertrand (2009), henceforth referred to as 'the Authors', is that sequential lineups, independent of other procedural elements, offer greater protection against mistaken identifications of innocent people, and although they also lead to fewer identifications of guilty people, this reduction is smaller.

The claim that sequential lineups are superior has not been restricted to the pages of research journals, or academic conferences. It was considered as alternative procedure by the Technical Working Group on Eyewitness Evidence (1999), but was not given preference. Despite this failure, in the intervening years it has been widely and assertively recommended to the criminal justice system by several eyewitness researchers, but especially by RCL Lindsay (e.g. Lindsay, 1999 - 'selling the sequential lineup'). The wholesale promotion of the sequential lineup to criminal justice officials has had the desired effect in several jurisdictions.

Sequential presentation's impact on false positive identifications, or correct identifications is not clear. Sequential presentation has not, in and of itself, been studied in a systematic way. The Lindsay-Wells lineup combines sequential presentation with other procedural elements, so that the term 'sequential' is merely a synecdoche. Sequential presentation has not been unconfounded from the rest of the Lindsay-Wells package, and we do not know whether sequential presentation *per se* leads to fewer false identifications. Lindsay and colleagues do not dispute this point. It is important because the theoretical construct underlying the Lindsay-Wells lineup ('relative judgment strategy') proposes that sequential presentation reduces the tendency of witnesses to make relative judgments. This theoretical proposition has not been tested.

Failure to counterbalance the position of the suspect in a lineup is a severe methodological weakness in approximately half of the studies that are said to demonstrate the sequential superiority effect. The effect of such methodological errors is often hard to estimate, but research failing to avoid them is routinely rejected during peer review. Even if their effects are not known it is unacceptable scientific practice to neglect standard methodological precautions - it renders results uninterpretable, and undermines the evidence - > conclusion link central to the scientific enterprise. Meta-analysis reveals the effects of this methodological error in the literature on sequential lineups: A meta-analysis shows that studies that report counterbalancing suspect position report a reduction in the rate of false identification equivalent in size, on average, to the reduction in the rate of correct identification while studies that do *not* report counterbalancing show an advantage in favor of the sequential lineup. There is no question about whether this methodological blunder occurred or not: most of the studies that do not counterbalance emanate from RCL Lindsay's laboratory, and Lindsay has confirmed this himself in the article in this volume, and taken responsibility for the decision. We welcome his frankness. We wish he would now accept the obvious implication: that the results of those studies should be discounted, and the question of sequential superiority decided on the remaining literature.

In fact the authors do not accept this, and do not accept even that this methodological gaffe has had any effect on the literature. The question is to what extent the dependence of the sequential superiority effect on failure to counterbalance should undermine the faith of the research and policy communities in the sequential superiority claim. The authors argue that it should not. Their central arguments in this respect are (i) that a more recent meta-analysis by Nancy Steblay (2007) does not reveal a counterbalancing dependency; and (ii) that even if a counterbalancing dependency

does exist, it is incumbent on critics to show how, and why, counterbalancing should produce a sequential superiority effect.

The Steblay (2007) meta-analysis is not in the public domain and has not passed peer review. Two of us heard the conference presentation, and we do not believe that any evidence was presented there that could warrant the conclusion that there is no counterbalancing effect. A number of study samples were used for various analyses, and we cannot know to which the Authors claim refers. In any case, the point is moot – an unpublished, unrefereed study to which we have no access allows no opportunity for rebuttal, and the correct conclusion is that the sequential superiority effect depends on the position or order of the suspect in the lineup. There is good reason to think that ordinal position is important.

The second point the authors make on counterbalancing is peculiar: that new empirical studies be performed, dedicated to examining the ‘effect of failure to counterbalance’. This implies that more weight should be attached to a new study than to the entire extant literature. But the point of a meta-analysis, surely, is that conclusions based on a large set (preferably the population) of studies is preferable to conclusions drawn from a single or smaller set of studies. This goes to the presence of measurement error, sampling adequacy, random sampling variation, and the host of other factors that a meta-analysis is able to take into account, and which by definition a single study or set of studies cannot. More troubling is the implication that the onus for a basic methodological error can be shifted to those who point it out. Every researcher in the field knows that counterbalancing is a fundamental requirement of experimental research, and cannot simply be rejected according to investigators’ whims. Either we agree on basic methodological canons for the conduct of science, or we have no science.

The authors weave a multifaceted account that at times argues for the superiority of sequential lineups and identify areas of missing knowledge. Much of the discussion focuses on an array of other issues. Nevertheless, we appreciate the analytical approach the authors have taken and their frankness about methodological difficulties with some of the research on sequential lineups. And we understand their conclusion that ‘a conservative decision strategy is the best policy based on the value system of the Anglo-American criminal justice system.’ But, we believe there are other means of achieving a conservative decision strategy that do not require codifying preferential use of sequential lineups.

The important questions begin with whether the published (peer reviewed and publicly accessible) literature shows replicable evidence that sequential lineup presentation is superior to simultaneously presented lineups on the important dimensions of comparison, to a degree that justifies their codification into law in preference to other techniques, and makes an independent contribution to eyewitness identification in addition to other factors (instructions, lineup construction, to name just two).

Research to date shows that there is no general advantage of sequential lineups over simultaneous lineups: The decrease of false identifications under sequential conditions is entirely offset by the concomitant decrease of correct identifications. While correct and false identification are coin of the realm in the applied setting as identification impacts real people, there are other ways of looking at policy relevant outcomes of choice of technique. For example, the authors make pronouncements about the obviously greater importance of false identifications compared with correct identifications. However, they are not so obvious. Malpass (2006) uses a model for assessing the utility of alternate policies and explicitly explores the relative values placed on correct and false identifications. At some level of frequency false convictions will achieve a level of outrage in society, and at some level of frequency failing to apprehend and convict real offenders

will achieve a similar level. Setting the relative levels of tolerance in ways that reflect our societal values is a complex process (Malpass, 2006), but not for applied psychologists to dictate for the complex cultural mosaic of our nations.

We continue in response to points in the Authors main paper, by section.

The sequential lineup effect

Two matters arise early in this section. First, the use of unpublished sources to advance sequential advocacy. Second, the Authors continue to use the inflated estimate of false positive choices from Steblay *et al.* (2001): the estimate of 51% false alarms derived from the 'identify any foil' strategy which we discussed at some length in our initial paper. It is questionable whether this is science or advocacy.

Differences in the correct ID rate

Signal Detection theory (SDT) is discussed more than once. One claim is that signal detection theory is not a memory theory. True enough, but it clearly is a theory of response decision-making. It is interesting, therefore, that the authors frame the contribution of sequential lineups as a matter of response decisions and response decision criteria. This is important. Nothing can be done about the initial strength of witness memory, but much can be done at the point of the response decision. SDT is explicitly associated with decision theory, instantiated by a pay-off matrix influencing criterion setting. It is the structure of the pay-off matrix that is modified by lineup instructions. Malpass & Devine (1984) worked this out for the ID problem showing that SDT is based on an articulate theory of decision processes which explain instruction effects. Sequential presentation of lineups may not be a particularly strong way to achieve reductions in response decision criteria, in comparison with other interventions, such as instructions.

'Technically, any incorrect choice of a lineup member is a false alarm'. We disagree. First, 'false alarm' does not apply to lineup identification studies, but rather is a concept from recognition memory. In the lineup context a false identification refers to an identification of an innocent suspect. Filler identifications are a qualitatively different category, and have a different meaning and status. When the authors ask whether it is one decision or when a person chooses someone from a six person lineup, the answer is that it depends on whether they are being asked to make only one omnibus decision or one decision for each member of the lineup. Traditionally, the simultaneous lineup asks for one omnibus decision and the sequential lineup asks for one decision per lineup member. This is, in fact, one of the confounds between the two forms of administration. There is no reason why six identification questions cannot be asked in a simultaneous lineup. It is possible that doing so would induce a more 'absolute' decision process, and that it is the procedure of asking that a decision be made for each member of the lineup rather than sequential presentation that is the engine behind the putative sequential superiority effect. The sequential lineup advocates did not think to ask this question, and we do not know the answer. It is a good example, however, of the importance of deconstructing the package of variables loosely referred to as the sequential lineup so that the simultaneous/sequential comparison can become unconfounded.

Methodological issues

The authors begin this section with the assertion that: 'Still, little is known about many issues. Some argue that this is reason enough to abandon adoption of sequential lineups

(Malpass, Tredoux, & McQuiston-Surrett, 2009). However, every aspect of such a procedure will never be explored.' (p. 16). Twenty-five years ago Loftus (1983) correctly quoted Malpass as saying 'knowledge does not have to be perfect in order for people to use it'. This is a position that RSM still advocates, and which is explored at some length by Malpass *et al.* (2008). In the sequential lineup question, we are nowhere close to that extremely high criterion, as the authors point out repeatedly. The question is whether it is reasonable to codify sequential lineups as the only recommended identification procedure, or even as the procedure of choice, in the face of acknowledged ambiguities in interpretation, methodological lapses, a meta-analysis showing that reductions in false alarms are completely offset by reductions in correct identifications and mounting evidence that sequential superiority is limited to specific boundary conditions (Carlson, Gronlund, & Clark, 2008; Clark & Davey, 2005; Clark, Howell & Davey, 2008; Gronlund, 2005; Malpass, 2006).

The authors claim 'DNA would not be in use today if all questions about the technique had to be answered before it was adopted.' Similar to the scientific evaluation process currently underway for lineup administration policy, the use of DNA in the legal context was vigorously challenged early in its development. It was first accepted in court and subsequently disqualified due to important basic questions about the technique being asked by members of the scientific community. New research was undertaken and validation standards were developed. Following improvement of methods a greater scientific solidity of the procedures was achieved and the technique(s) became admissible (Thompson & Cole, 2006). The analogy to our present discussion is very close, although, we doubt the outcome will be similar.

Raising the matter of guessing again calls attention to the use of sources that are not peer reviewed. Whether one or another form of lineup produces more guessing is a matter of speculation, because there is not a clear, empirically supported account of why that might happen and how it might occur.

Policy

The discussion of false identifications in the real world anecdotally sets up the argument that reducing false identifications has more value than preserving correct identifications, which plays into the putative strength of sequential lineups. The first problem is that this advantage is stripped away when meta-analysis considers studies that explicitly used counterbalancing. The second problem with this line of thinking is that it is not obvious how the society hosting a lineup policy will assign value to the various outcomes of eyewitness identification. Malpass (2006) estimated the *a priori* probability of the offender being present in the lineup at 80%. But that estimate is based on one study and one method, and is probably unstable across cases and jurisdictions. For this reason, he calculated the utilities of simultaneous and sequential lineups across the entire range of *a priori* probabilities of offender presence. He found that, assuming an equal value model, the utility of simultaneous lineups was moderate and changed little across the range while the utility of sequential lineups ranged from very high when the *a priori* probability of guilt was very low, to very low utility when the *a priori* probability of guilt was very high. Quantitative models can assist us by exploring ranges of values that are not easily captured in the laboratory and inaccessible in the field. Malpass (2006) discusses the matter of the relative value of false and correct identifications at some length.

The authors point out that the Sequential Lineup is not good enough. We agree, and particularly we agree that the search for lineup improvement – of both reducing false identifications and increasing (at least preserving) correct identifications should proceed on a broad front, not limited to packages of lineup administration procedures.

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