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Distortions of the Allport and Postman Rumor Study in the Eyewitness Testimony Literature*

Molly Treadway and Michael McCloskey†

In the psychological literature on eyewitness testimony, the classic Allport and Postman (1945, 1947) study of rumor has consistently been described inaccurately. In the inaccurate accounts both the procedures and implications of the study have been substantially distorted. The erroneous descriptions have found their way into the legal literature, apparently as the results of legal scholars' reliance on the inaccurate secondary reports in the psychological literature. Furthermore, psychologists testifying as experts in court have offered inaccurate accounts of the study in support of contentions about effects of prejudice on eyewitness perception. This note contrasts the actual methods and results of the Allport and Postman study with the descriptions in the eyewitness testimony literature, with the aims of averting future errors concerning the study, and of emphasizing the importance of consulting original sources and reading them carefully.

One of the most active areas at the interface of law and psychology is that of eyewitness perception and memory. This activity is reflected in a large and growing collection of monographs and review articles in which psychologists summarize and interpret the available research (e.g., Ellison & Buckhout, 1981; Loftus, 1979; Penrod, Loftus, & Winkler, 1982; Shepherd, Ellis, & Davies, 1982; Yarmey, 1979).

Perhaps understandably, psychologists who are discussing a large number of studies may not read all of the original reports carefully, and may even rely upon secondary sources for accounts of some. Although usually harmless, these practices carry certain risks. An author who fails to read the original report of a study

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† Johns Hopkins University.

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carefully may introduce an inaccurate account into the scientific literature. Subsequent authors who rely upon this secondary account instead of consulting the original report may disseminate the initial error through their own writings. If this process continues, the inaccurate account may spread throughout the literature, perhaps becoming even more and more distorted as it is increasingly removed from the original report.

In this note we discuss an erroneous account of a classic study, an account that has come to be widely accepted in the field of eyewitness research. Our aims are to avert future errors concerning this study, and to emphasize the importance of consulting original reports and reading them carefully.

In the mid-1940s, Allport and Postman reported a study of rumor, in which they examined how a story changes as it is passed from person to person (Allport & Postman, 1945, 1947). In "thirty-odd" experiments with subjects from "a wide variety of groups," the following standard procedure was used:

> Out of a college class or forum audience, a group of people—usually six or seven—are selected (ordinarily volunteers being used). They are asked to leave the room. It is not customary to tell them that the experiment pertains to rumor . . . They are told only that they must listen carefully to what they will hear when they return to the room and repeat what they have heard "as exactly as possible."
>
> When the subjects have left the room, a slide depicting some detailed situation is thrown on the screen and some member of the audience is assigned the task of describing it (while looking at it) to the first subject. He is requested to include about twenty details in his description.
>
> After the initial description of the picture a member of the group of subjects is called back into the room and is placed in a position where he cannot see the picture on the projection screen although everyone else in the room can see it . . . The first subject listens to the "eyewitness" account given him by the selected member of the audience or by the experimenter.
>
> A second subject is called into the room, taking his position beside the first subject. Both are unable to see the screen. The first subject then repeats as accurately as he can what he has heard about the scene (still visible to the audience on the screen) . . . A third subject then takes his position next to the second and listens to his report.
>
> This procedure continues in the same manner until the last subject has repeated the story he has heard, and taken his seat (usually amidst laughter) to compare his final version with the original on the screen (excerpted from Allport & Postman, 1947: pp. 65–67).

Allport and Postman found that the description of the scene often changed dramatically as it was passed from person to person. One particularly interesting result concerns the scene shown in Figure 1, in which a white man holding a straight razor is apparently confronting a black man on a subway car. Allport and Postman (1945, 1947) found that in over half of the experiments using this picture, at some stage in the series of reports the black man (rather than the white man) was said to hold the razor in his hand (Allport & Postman, 1947: p. 111).

In the psychological literature on eyewitness testimony, this finding has repeatedly been described inaccurately, and has often been cited as evidence for conclusions that are widely discrepant from those drawn by Allport and Postman. Some accounts contain only minor inaccuracies. For example, Loftus (1979) states that the first subject in the chain viewed the picture briefly and then described it, when in fact the initial subject described the picture while looking at it.

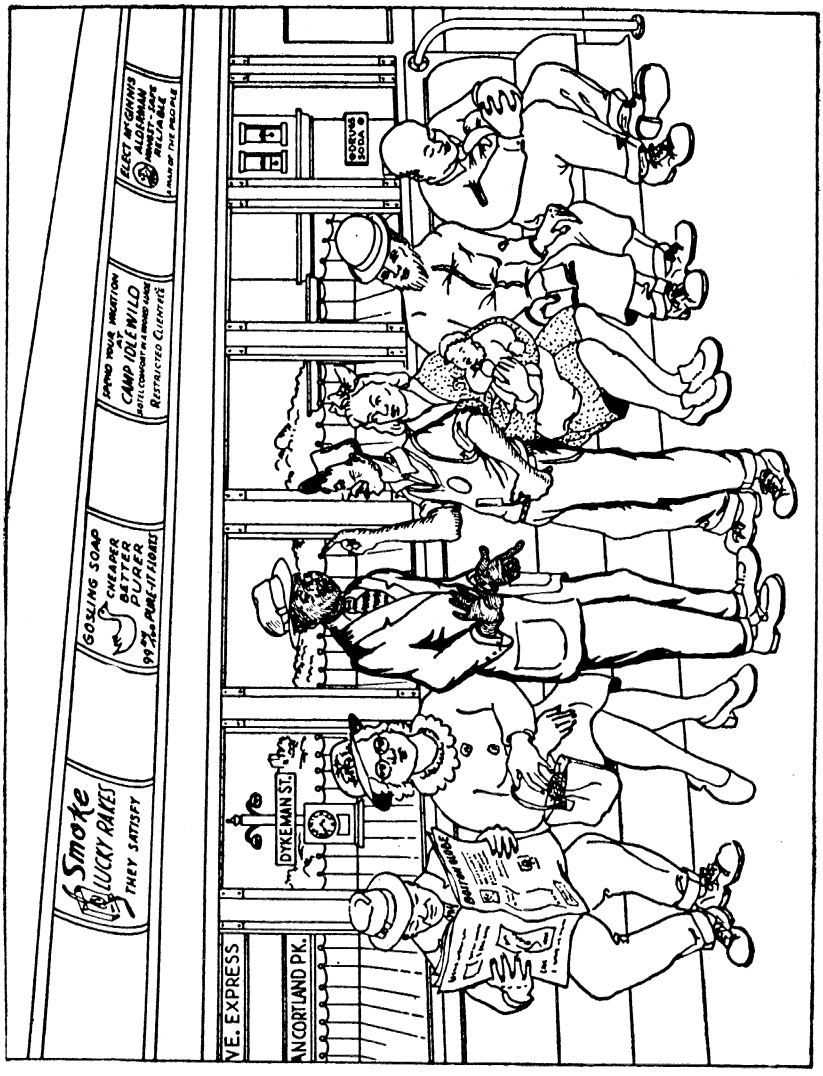

Fig. 1. Copy of the subway scene used in the original Allport and Postman (1945, 1947) study.

Loftus also indicates that in over half of the experiments with the subway scene the last subject in the chain reports that the black man holds the razor, when in fact Allport and Postman report merely that for over half of the six- to seven-person chains the black man is said to hold the razor at some point in the chain.

In contrast to these relatively minor inaccuracies, other accounts of the Allport and Postman study include major errors that distort the purpose and implications of the study (e.g., Buckhout, 1974; Ellison & Buckhout, 1981; Luce, 1977; Marshall, 1980; Yarmey, 1979). For example, Buckhout (1974) gives the following description of the study:

> In a classic study of this phenomenon Gordon W. Allport of Harvard had his subjects take a brief look at a drawing of several people on a subway train, including a seated black man and a white man standing with a razor in his hand . . . After a brief look at a drawing such as this one, half of the observers report having seen the razor, a stereotyped symbol of violence in blacks, in the black man's hand. (Buckhout, 1974: p. 26)

Yarmey (1979) offers a similar account:

> In a classical study by Allport and Postman (1945), subjects were shown a picture of a white man holding a razor while arguing with a black man. Of the subjects questioned, 50% later remembered the black man as holding the razor. (Yarmey, 1979: pp. 79–80)

The usual conclusion drawn by authors describing the study in this way is that expectations based on prejudices or stereotypes concerning the association between race and criminality lead subjects who view the scene to "see" the razor in the hand of the black man (e.g., Buckhout, 1974). Marshall, for example, concludes from the inaccurate account of the study that "People . . . have a need to see in terms of their expectations which in turn may be cued by their biases and stereotypes" (Marshall, 1980: p. 56).

There are several obvious inaccuracies in the Buckhout and Yarmey descriptions of the Allport and Postman study. The most blatant error is that both writers imply that subjects who actually *viewed* the picture mistakenly reported that the razor was held by the black man. In the actual study, however, only the first subject in the chain saw the picture. Because the initial subject described the picture in detail while looking at it, it is unlikely that this subject misplaced the razor in his or her description. Presumably, the subjects who made the razor-shift error were subjects later in the chain, who never saw the picture, but only heard the description given by the immediately preceding subject. The design and results of the Allport and Postman study are similar to a "telephone game" played by children, wherein a phrase or story becomes changed as it is passed from child

[1] Even this conclusion is not at all clear. It is conceivable that the error occurred for reasons unrelated to such biases. Allport and Postman's studies did not include a control condition in which the razor was originally in the hand of the *black* man, so it is not known whether the razor would have "shifted" from a black man to a white man in subsequent descriptions as often as it did from a white man to a black man. Pilot work that we have conducted using the Allport and Postman procedure indicates that many different objects in the scene (e.g., a hat, a newspaper) tend to "migrate" as the description is passed from subject to subject. Thus, the razor-shift error reported in the original study may reflect simple memory failures not involving stereotypical expectations.

to child. Although subjects may have been influenced in some way by prejudicial expectations when they wrongly reported that the black man held the razor,[1] the actual Allport and Postman finding does not demonstrate misperception of the scene, and is certainly far less dramatic than the "result" described by Buckhout, Yarmey, and others. Fiction, in this instance, is stranger than truth.

The inaccurate description and interpretation of the Allport and Postman study has appeared not only in the psychological literature, but also in law review articles and legal handbooks (e.g., Johnson, 1984, 1985; Sannito & McGovern, 1985; Taylor, 1982; Woocher, 1977). For example, Woocher (1977) offered the following description of the study in his *Stanford Law Review* article on eyewitness testimony:

> In a classic experiment on the effects of social prejudice on perceptions, psychologists showed subjects a picture of several people on a subway train, including a white man holding an open razor and apparently arguing with a black man standing next to him. When asked to describe what they had seen, over half the subjects reported that the black man was brandishing the razor (Woocher, 1977: p. 981).

The Allport and Postman study has also found its way into the courtroom, where psychologists testifying as expert witnesses have used the erroneous description to support their contentions about effects of biases and expectations on eyewitnesses' perceptions of persons or events. The following is an excerpt from a psychologist's in-court testimony:

> This is a copy of a line drawing that was used in a lot of research back about 40 years ago . . . This was flashed very quickly at people like that, people who have a variety of racial orientations, to people who were very prejudiced and people who weren't very prejudiced and people who weren't prejudiced at all, and they reported seeing different things.
>
> The moderately prejudiced people often would report seeing a black man with a gun in his hand threatening a white man. As you can see studying it for a long period of time there is no gun there at all. It's just a hand with index finger pointed toward the ground.
>
> Some of the more extremely racially prejudiced people reported seeing a black man with an open straight razor in his hand threatening a white man. And as a matter of fact you can see the open straight razor in the hand of the white man.
>
> So once again our expectations—our attitudes are strong determinants of what our perception is (Shomer, testifying in *People v. Marsh*, 1984).

Ironically, the reporting of the Allport and Postman study in the psychological and legal literature on eyewitness testimony, and in expert psychological testimony, seems to reflect exactly the phenomenon that Allport and Postman were studying. The account of the study has changed substantially as it has been transmitted from one psychologist to another, and ultimately to legal scholars, attorneys, judges, and juries. It is difficult to determine exactly how the inaccurate account of the study developed and spread. However, it is evident that the erroneous accounts have been passed from author to author, because later sources often repeat not only the general misrepresentation but also the very specific errors of an earlier source. For example, Buckhout's (1974) discussion indicated

that the black man in the picture was seated, although in fact he is standing. This error, as well as several others, is echoed in Luce's (1977) account:

> A classic experiment in psychology also illustrates the effects of expectancy and personal biases of the observer. Psychologist Gordon W. Allport of Harvard had subjects view a drawing of several people on a subway train, including a white man standing with a razor in his hand and a black man seated among the other passengers. Fifty percent of the observers reported later that the razor was in the hand of the black man (Luce, 1977: p. 6).

Similarly, Woocher (1977) cited the Allport and Postman (1947) study inaccurately, giving an incorrect year (1965) and page number (75). These same errors appear in a footnote in Johnson's (1984) later *Cornell Law Review* article:

> G. ALLPORT & L. POSTMAN, THE PSYCHOLOGY OF RUMOR 75 (1965). Allport showed subjects a picture of several people on a subway car, including a white man holding a razor and apparently arguing with a black man. Over half of the subjects reported that the black man held the razor. (Johnson, 1984: p. 950)

In the accompanying text Johnson draws a very strong conclusion from the mischaracterized study:

> As Allport first reported in 1965, white witnesses expect to see black criminals. This expectation is so strong that whites may observe an interracial scene in which a white person is the aggressor, yet remember the black person as the aggressor. (Johnson, 1984: p. 950)

Thus, psychologists, legal scholars, and expert witnesses have unwittingly replicated the Allport and Postman study of rumor in their reporting of the study.

CONCLUSION

Cursory readings of original reports and reliance on secondary sources may have serious consequences. The first can lead to the introduction of an erroneous account of a study into a scientific literature, and the second can result in the propagation of this account throughout the literature, where it may become even more distorted as it is passed from writer to writer. Erroneous accounts of studies are not confined to the area of eyewitness testimony; they undoubtedly can be found in many other areas as well (see, e.g., Loftus, 1974). In certain instances, as with the Allport and Postman (1945, 1947) study, an inaccurate account can gain wide acceptance. It is thus the scientist's reponsibility to read primary sources carefully and not to rely on secondary sources, particularly when writing for, or testifying before, an audience that may include attorneys, judges, jurors, and others who do not have ready access to the original sources.

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