Realism and Eyewitness Identification Research
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The importance of realism in eyewitness identification research is examined as the basis for both the credibility and utility of the information it provides. Without knowledge of how laboratory eyewitnesses behave differently from real eyewitnesses, the relevance and external validity of identification studies may be questioned. Factors differentiating these identification contexts are discussed. Witnesses in identification studies are in social decision-making contexts similar to those of real eyewitnesses when their decision to choose someone or to reject the lineup may have a significant impact on others' lives. Two studies are reported which preserve aspects of realism. Both presented witnesses with a realistic vandalism. The second maintained realism through the identification situation. The first study demonstrated effects of biased instructions on witnesses' willingness to make a lineup choice and on identification errors (with the offender present and absent). The second study showed an unexpected preference of witnesses for making an identification when the supposed consequences for the suspect were to be severe. To evaluate the generalizability and utility of laboratory studies it is important to determine whether their results and related theoretical analyses survive the transposition to more realistic contexts. Realistic studies should serve as benchmarks against which simulations are compared and their generalizability evaluated.

The purpose of eyewitness identification research is to contribute to the solution of the practical problems of obtaining accurate criminal identifications, to assist legal fact finders in evaluating eyewitness testimony, and to assist lawmakers in formulating procedures for developing valid eyewitness evidence. While the object of the field is to

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contribute to the understanding of processes occurring in the natural social environment, subjects in eyewitness identification studies have rarely witnessed what appears to be a realistic criminal offense. And when these "witnesses" are asked to view a lineup they know that they are participants in an experiment. They know that neither they nor the "offender" will experience the consequences of either a correct or an incorrect judgment. It is not surprising then that psychologists' expert testimony has not often been considered of sufficient probative value to be heard by a jury, and that psychological expertise in this area has not been widely sought out by lawmakers or the police. Expressed bluntly, we have a deserved credibility problem. Although we may have a great deal to say that is of relevance to the criminal justice system, the empirical base of our contribution is derived from studies that appear to only remotely reflect the conditions experienced by witnesses to actual criminal events. If this area of research is to contribute to an understanding of eyewitness behavior, and have an impact on the processes of criminal investigation, it must either be clearly shown that laboratory studies in this field can be generalized to real-world situations, or our studies must deal with more realistic events. In order to evaluate the existing literature and to ensure the relevance of future research, studies must be constructed which will enable comparison between real criminal offenses and those contrived for laboratory investigation.

What eyewitness identification research lacks in realism it possesses in control over some of the factors influencing identification decisions. Without the control afforded by the laboratory and by experimental studies many issues cannot be investigated effectively. On the other hand, no matter how well executed or elegant our studies are, they will be of questionable relevance at best without a knowledge of the differences between eyewitnessing in real situations compared with research situations. Thus we are in a circular situation with regard to two important aspects of experimental design: generalizability and control. Without control over factors which hamper interpretation of genuine eyewitness performances it is difficult to do research that is clearly interpretable. At the same time those situations in which control can be obtained nearly always sacrifice realism. The events about which factual knowledge is needed—actual criminal offenses—cannot themselves be reconstructed for careful study.

The criminal justice system does control the events experienced by eyewitnesses during the course of investigation, however (systems variables; Wells, 1978), and concern for accuracy in eyewitness testimony has focused on the events surrounding witnesses making an identification. Psychological studies have generally been concerned with the ways in which information given to witnesses intentionally or inadvertently can affect their subsequent identifications (Loftus, 1976; Loftus, 1975a, 1975b; Powers, Andriks, & Loftus, 1979; Doob and Kirshenbaum, 1973), and the ways in which the structure and procedure of identification lineups (photographic or corporeal) can contribute to bias (Brown, Deffenbacher, & Sturgill, 1977; Buckhout, Figueroa, & Hoff, 1975; Davies, Shepherd, & Ellis, 1979; Doob & Kirshenbaum, 1973; Egan, Pittner, & Goldstein, 1977; Hall & Ostrom, Note 1; Leippe, Wells, & Ostrom, 1978; Lindsay, Wells, & Rumpel, 1981; Wells, Lindsay, & Ferguson, 1979). Perhaps the most prominent issue for the Criminal Justice System, for the United States Supreme Court, and for eyewitness identification researchers has been the issue of procedural bias and suggestibility in obtaining eyewitness identifications.

Reviews of legal and psychological issues surrounding this problem can be found in Levine and Tapp, (1973), Loftus, (1979), Yarmey, (1979), Clifford and Bull (1978), and Woocher (1977). A concise statement of the problem is the following.

To achieve the least biased results in an identification lineup, witnesses should be indifferent as to whether or not they identify someone from the lineup. However, for a variety of reasons to be discussed below there will usually be pressures that will make choosing someone out of the lineup more desirable to the witness than not choosing someone. This tendency jeopardizes the administration of justice. While witnesses who otherwise would not choose will occasionally pick out the offender (if he is in fact present), in other cases they will pick someone they did not see. If this person is a suspect, and not a lineup "foil," known to be innocent, there is a danger of wrongful conviction or an unjust bargained guilty plea. Techniques or procedures that would reduce these dangers, and reduce the pressures favoring choosing someone from the lineup, would be a useful contribution to the administration of justice. There are a number of empirical questions which arise from the above statement of the legal problem. First, do the various factors suspected of biasing witnesses towards choosing someone from the lineup actually do so? Second, if there is a bias towards choosing someone, to what degree (or under what conditions) does this increase the chance of correct compared to erroneous identifications? Third, are there techniques that can reduce or eliminate a bias to choose, or which can otherwise improve eyewitness identification accuracy?

Designing empirical studies to answer these questions would profit from a theoretical account of the social and psychological processes in judgment tasks similar to eyewitness identifications. The literature on decision making in perception and recognition is an important source of clarifying concepts and methodologies which distinguish between the psychosocial processes influencing the decision to choose and the accuracy of the choice. The use of decision processes in the theory of signal detectability (TSD) seems particularly useful even though the methods of TSD are not strictly applicable to the structure and procedures of lineups. TSD draws a sharp distinction between an observer's actual ability to identify the person previously seen (the offender) and the observer's identification *decision criterion*. The decision criterion roughly corresponds to the strength or vividness of recollection an observer requires before being willing to report that a given person is the person who was previously seen performing an offense. Factors believed to make witnesses willing to make a lineup choice at lower strengths of recollection (lowered decision criterion) include a desire to cooperate with their (the witnesses) perception that the police wish them to identify someone, a desire to appear intelligent, and other beliefs about the costs and benefits of choosing or not choosing that make choosing the more "valuable" response. These factors have little or nothing to do with the actual amount of information the witness can retrieve about the offender's appearance. Thus the value to witnesses of their response (to choose or to reject the lineup) can change independently of the information the witnesses have and can independently affect their willingness to make an identification. The likelihood of a correct identification is a joint function of the observer's ability to distinguish old from new events (the offender from the lineup foils) and the level of their identification decision criterion.

Separating the factors related to witnesses' decisions of whether or not to make a lineup choice from factors related to the accuracy of their choices led Malpass and

Devine (1981a) to conceptualize them separately and examine their interrelation-
ship in a study investigating instructional bias in lineups which followed a realistically
staged vandalism. The study was oriented to the first and second questions noted
above: whether lineup instructions affect the choosing and accuracy of witnesses, to
what degree, and under what conditions. The major issue of concern of this study was
the possibility that false identification of innocent persons would be increased by
witnesses' beliefs that one of the persons displayed in a lineup was to be chosen.
Consequently we varied the degree of bias in instructions given to witnesses in an ef-
fort to examine the influence of instructional bias on witnesses' willingness to make an
identification. Biased instructions, which fail to explicitly provide witnesses the option
of rejecting the lineup, should lead to high rates of choosing. Unbiased instructions
that explicitly provide this option should result in lower rates of choosing. We were
particularly interested in the effect these instructions would have on witnesses'
willingness to choose a lineup member as the offender when the offender was present
in the lineup, *and* when he was absent. From the point of view of ecological validity
this is a very important feature of lineups to investigate because in real lineup
situations the guilty person is absent some unknown percentage of the time. We ex-
pected that the absence of the offender, together with biased instructions would result
in a high rate of choosing and a correspondingly high rate of false identifications.

   This study was a modest step in the direction of realism, as we presented to ap-
proximately 350 student observers a realistically staged vandalism of moderate
seriousness and arousal. During a pause in a biofeedback demonstration the vandal
(actually a confederate of the investigators) entered the room, spoke with the instruc-
tor and was asked to wait next to a rack of apparatus. The vandal appeared interested
in the apparatus, and changed a switch setting. The instructor asked him to leave the
equipment alone. However, twice more the vandal changed dial settings and the verbal
response of the instructor increased in anger. The vandal responded to the last of these
by shouting an obscenity at the instructor, pushing the electronics panel to the floor,
and running from the room through a rear door. The response from the audience was
a distinctly audible gasp. After about 20 minutes of disorganization and attempts to
continue the demonstration the audience was told that the vandalism had been staged
and that the vandal was a confederate of the investigators. The students were then
asked to attend a lineup to be held on the following three evenings. One hundred
witnesses (74 female, 26 male) appeared for these lineups.

   Each witness individually observed a 5-person corporeal lineup through a one-
way mirror. One half of the subject witnesses were given a biased instruction which
implied that those in charge of the lineup were confident that the vandal was present,
and that the witness was to identify him. Witnesses wishing to reject all five of the per-
sons in the lineup as having been the vandal had to ask how to indicate their judgment
since no place was provided for such a response. The unbiased instruction, however,
told the eyewitness that those in charge of the lineup were not confident that the van-
dal was present in the lineup, that the vandal may or may not be present and that the
eyewitness was free to claim that he was, or was not. For each witness the presence of
the vandal was systematically varied. For every other witness the vandal was absent
and his place in the lineup taken by an alternate.

   The results support the original hypothesis and indicate the danger of biasing

lineup instructions, particularly when the vandal is absent from the lineup. Witnesses chose at a very high rate with the vandal present (100%, biased and 83%, unbiased), but the rate of choosing with the vandal absent was contingent on instructions (78%, biased and 33%, unbiased). Errors were relatively low with the vandal present irrespective of instructions (25%, biased and 17%, unbiased); with the vandal absent the biased instruction led to a high error rate (78%) and the unbiased instruction led to a significantly lower error rate (33%). With the vandal present the type of error made reversed depending on instructions: unbiased instructions resulted in false rejections of the lineup while biased instructions resulted in false identifications (a more harmful error).[1] Changing the instructions from biased to unbiased resulted in fewer choices and fewer false identifications without a decrease in correct identifications. These findings imply that unbiasing lineup instructions could yield substantial benefits, reducing the overall rates of choosing and errors under both offender present and absent conditions and minimizing the effects of the errors that do occur (substituting false rejections for false identifications). It is difficult to estimate, however, how well these results represent the behavior of witnesses in the real world.

This study has some severe limitations considered in the context of a comprehensive view of the eyewitness identification problem. Although the event they viewed was realistic, from the moment the staged nature of the vandalism was disclosed, the observers were no longer witnesses to a crime, but subjects in a laboratory experiment. Witnesses in the real world who view an identification lineup do so in the context of a number of possible consequences of their actions. For example, if they make a correct identification they may help to bring a criminal to justice. If they fail to make an identification they may appear to be uncooperative with the police, and they may allow a guilty person to remain free. Many of the consequences for witnesses in the real world and in laboratory experiments are similar, or differ only in magnitude. For example, once subjects have participated in a research project and are debriefed their involvement ends. However, for real eyewitnesses their time commitments may extend far past the identification situation and require additional appearances at the police station, and in court. Personal consequences such as evaluation apprehension, or wanting to be cooperative, exist in both situations, but are believed to be more powerful in the realistic situations. Some consequences which may be important to real witnesses have little reality for subject "witnesses" who make a lineup judgment in a psychological experiment. For example, since subjects know that "suspects" are confederates of the experimenters they have no reason to fear incriminating innocent persons, or the retribution of an angry suspect. At the time of the lineup in the Malpass & Devine (1981a) study, witnesses knew that the vandal and the other lineup members were confederates and that their (the subjects) decision to choose or to reject

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[1]Appropriate lineup construction procedures, supported by court decisions, recommend placing only one suspect in lineups for single-offender offenses, with the remaining lineup participants (the foils) persons known to be innocent. If this were in fact implemented, then identifying a lineup foil would not be a harmful error. In our experience, however, this procedure is not uniformly followed. We have seen photo lineups containing as many as five suspects. Consequently, the importance of a false identification will vary according to the nature of lineup construction. However, if a false identification of an innocent suspect is made, that error is more harmful than erroneously rejecting the lineup.

the lineup had no significance for the well being of the "suspects" in the lineup. Whatever our subjects imagined was at stake for them is inherently trivial in comparison with what would have been at stake had the vandalism been real or had the "offense" been more serious. Without knowledge of whether (or in what ways) awareness of the possible consequences of their actions affect witnesses lineup decisions, and the ways in which the behavior of experimental "witnesses" differs from realistic witnesses as a result of these consequences, we cannot evaluate the external validity of eyewitness identification studies.

Our next study (Malpass, Devine, & Bergen, Note 2) went beyond the laboratory and placed witnesses in a situation that was not inherently trivial. Observers again witnessed a vandalism. However, in contrast to the previous study witnesses were not told that the vandalism had been staged. Witnesses left the lecture believing they had witnessed a crime. The study investigated whether the severity of the perceived punishment resulting from an identification would affect witnesses' behavior. Realism was extended through to the lineup situation. The police called for the witnesses and conducted the lineup. If the social context of our previous laboratory study (Malpass & Devine, 1981a) indeed had trivial consequences associated with it, and if the social context of a realistic eyewitness identification situation has nontrivial consequences associated with it, in what ways would we expect witnesses to behave differently when the consequences of their behavior are expected to be trivial as compared with more severe consequences? Should we expect there to be a difference at all? If there were no difference, then we could generalize directly from laboratory research where consequences are inherently trivial to real eyewitness situations where the consequences are more serious. The most prominent theme on this problem in the eyewitness literature is that witnesses will attempt to avoid making the two possible errors: identifying an innocent person, and failing to identify a guilty person. The value of a false identification is assumed to become more negative as the consequences of that identification for the offender become more severe, while increasing the severity of the consequences, punishment, in this case, does not affect the value of failing to identify the guilty. Our hypothesis, then, was that as punishment severity increases the costs (disutility) of a false identification would increase faster than the costs of an identification failure, resulting in witnesses being increasingly conservative, and less likely to make a lineup choice with increases in punishment severity. Thus as the cost (disutility) of a false identification increases, witnesses' willingness to identify someone should decrease. A similar argument is made by Loftus (1980) in a study of the effects of crime severity on jury decision making.

More than 200 people, most of them students, attended a lecture on biofeedback techniques. During the lecture, similar to the previous study, a disagreement occurred between one of the investigators and a student volunteer (actually a confederate of the investigators). The disagreement ended in the student pushing over an expensive-appearing rack of electronics equipment and escaping through a rear door. Following this act of vandalism the lecture was discontinued. The witnesses were not informed that the vandalism had been staged and thus they left the lecture believing they had witnessed an actual crime. On the next two days police officers appeared on the campus and held eyewitness identification lineups in a room in the student center. Two uniformed and armed police officers attended the lineups. One was placed outside the door of the room to supervise persons waiting to view a lineup. The other officer was

inside the room and administered the lineup procedure itself. Other personnel present were the second author of the current article (PGD) in the role of a police clerk and the first author of the current article (RSM) as the party whose equipment had been destroyed. Forty-two witnesses appeared to view a lineup.

Three independent variables were manipulated during the lineups: Instructions given to witnesses were either biased or unbiased; the vandal was either present or absent from the lineup; and the witnesses were led to believe that the consequences for the vandal if he were identified would be either trivial or severe. Lineup instructions and vandal presence were implemented approximately as in the previous study, except that the lineup instructions were given verbally by a police officer, and the witness' response was also taken verbally.

The severity of the consequences to the offender was manipulated by arranging for the witness to overhear a brief conversation between RSM and the police officer in charge of the lineup. While the officer was walking between the lineup viewing point and the witness, RSM approached and asked what would happen to the vandal if he were identified. The officer responded with a variation on one of the two following scripts.

> *Trivial consequence:* "Well, the college is really mad about it. They've had a lot of vandalism here this year. But I think they'll end up dropping charges and taking care of it inside the college. He'll probably just get a good talking to from the Dean."

> *Severe consequence:* "Well the college is really mad about it. They've had a lot of vandalism here this year, and I think they'll want to make an example out of him if we get him. The College will press charges and he'll probably have to pay for the equipment. And prosecution could mean a felony conviction and possibly some time in jail."

The witness was then escorted to the point from which the lineup could be viewed.

There are two important findings: the effect of the expected punishment manipulation on choosing rates, and the effects of the choosing rates on identification errors. The only significant result in the choosing data is the comparison between severe *vs.* trivial punishment conditions: Eighty-three percent of those in the severe punishment condition made a lineup choice, whereas only 26% of those in the trivial punishment condition made a choice ($z = 4.47$; $p < .001$). We will delay our discussion of this striking result, and first present the influence of this difference on identification errors. The only significant result for the data on errors is the interaction of vandal presence with the severity of punishment manipulation (calculated as suggested by Langer & Abelson, 1972; $z = 3.19$; $p < .001$) (see Table 1). This interaction can be

Table 1. Percentage of Witnesses Making an Error

Punishment	Vandal present	Vandal absent	Total
Severe	25	73	48
	($n = 12$)	($n = 11$)	($n = 23$)
Trivial	70	22	47
	($n = 10$)	($n = 9$)	($n = 19$)
Total	45	50	48
	($n = 22$)	($n = 20$)	($n = 42$)

accounted for by the pattern of choosing. When the punishment of the vandal was severe, the choosing rate was high. Since choosing resulted in errors when the vandal was absent, the severe punishment manipulation (which increased choosing) led to a high frequency of errors when the vandal was absent. However, when the vandal was present, the severe punishment manipulation led to a decrease in errors since some of the identifications made were correct. When the expected punishment was trivial, the resulting low frequency of choosing led to failures to identify the vandal when he was present and thus a high error rate when the vandal was present. In fact all of the errors in the trivial-punishment/vandal-present condition were of this kind. When the vandal was absent, however, a low choosing rate led to a high rate of correct rejections.

The fact that the witnesses receiving the severe punishment manipulation chose at a rate of 83% while those receiving the trivial punishment manipulation chose at the rate of 26% is in sharp contrast with our expectations. Our interpretation is that our analysis of the factors affecting witness's choosing was incomplete, as was our initial application of decision theory concepts to this analysis: we emphasized the two errors possible in a lineup situation to the exclusion of the two correct responses. Indeed, this is a common emphasis in the eyewitness identification literature, but it is an incomplete one.

The theory of signal detectability (TSD) suggests that we can predict the likelihood of an observer making a recognition judgment through the payoff matrix containing the values of the consequences resulting from the alternative responses the witness can make, given the various states of the world that can exist. Table 2 contains an illustration. The utility of a "hit" can be obtained by finding the consequences of a hit (in the beliefs of a given witness), finding the value the witness places on each of

Table 2. Payoff Matrix

	States of the world	
Witness's response	The best candidate in the lineup is the offender	The best candidate in the lineup is not the offender
Choose the best candidate in the lineup	RESULT: A CORRECT IDENTIFICATION Consequences: catch a criminal; look good to authorities; spend time in court; face the criminal & family; fear retribution; get even for the offense.	RESULT: A FALSE IDENTIFICATION Consequences: look stupid; cause wrongful imprisonment; have to face innocent person; be on losing side in court; guilty person running free.
Do not choose the best candidate in the lineup	RESULT: A FALSE REJECTION Consequences: appear uncooperative; offender goes unpunished; offender may commit other crime; look stupid if he's guilty; get out of further involvement; investigation continues wrongly.	RESULT: A CORRECT REJECTION Consequences: search for guilty continues; not implicating innocent persons; avoid unnecessry legal proceeding; looking good to authorities; disagree with police ideas about who's guilty; appear uncooperative.

these consequences, weighing each value by its subjective probability, and summing these products across consequences. The utility of the events represented by the other quadrants of the table can be found in a similar way. Some consequences of the four possible outcomes are listed in the table. The value of making an identification is found by summing the values of a *hit* and a *false identification,* while the value of not making an identification is found by summing the values of a *correct rejection* and a *false rejection.* Had we begun our analysis of what to expect from the punishment manipulation with the payoff matrix we would surely have asked ourselves to list the consequences of the witness's response options under the two experimental conditions, and would have inquired into some critical aspects of the social context of the vandalism at the college. We would very likely have asked ourselves about the value of "catching the guy" who damaged the program of a very popular professor (i.e., the value of a correct identification). While our expectations neglected this set of consequences, the interpretation of our finding is that the value of a correct response exerted a strong influence to increase the overall value of choosing. But the value of a correct identification was large only if it would have led to an effective punishment. If the punishment was to be a charade, if the vandal would get off in the end, then there was much less value associated with making a correct identification. Thus the value of choosing is a function of both the value of making a correct identification as well as the negative value of making an incorrect identification. In the present study we felt the value of "getting the guy" overshadowed the negative value of making an identification error. Our general conclusion is that we need to take a comprehensive look at the social decision-making context and the entire range of possible alternatives before we can fully understand witnesses' behavior.

While this study had a high degree of realism there were a number of points on which the study was not ecologically valid. First, the lineups were held outside of a police station or similar public facility. Second, the lineup was a corporeal, face-to-face lineup. This is not common practice in the United States, while it is in England. Third, and perhaps most unusual, the victim (RSM) was present during the lineups and was allowed to converse with the police officers in charge, in the presence of the witnesses. This brings into focus a distinction that has been avoided in the previous discussion, between realism and ecological validity. Realism, particularly in the case of our police lineup, is in the eye of the subject/witness. If the subjects/witnesses believe that they are participants in a real police lineup then the conditions are fulfilled, and their beliefs in the reality of the consequences of their behavior are comparable to the state of mind of real witnesses to genuine crimes. To construct studies that are both realistic and ecologically valid is highly desirable, but requires a great deal of documentation, and an adequate account of the ecology of eyewitness identification on which to pattern the research. This requires information such as the following:

1. What is police practice, across community size and crime seriousness, with respect to using corporeal or photographic lineups?

2. How are witnesses in fact instructed? What procedures are used that might bias instructions given to eyewitnesses, across community size, crime seriousness, etc.? Is documentary evidence available on how witnesses are instructed? Are lineup sessions recorded? Are the preliminary interviews with witnesses recorded? What is the total impression that witnesses have of their task in the lineup?

3. What is the number of foils in lineups, in actual practice?

4. What proportion of corporeal or photo lineups contain more than one person who is not positively known to be innocent?

There appears to be a moderately large range of variation on many issues, and there is certainly some difficulty in discovering what current practice is. Designing ecologically valid studies requires specific knowledge of the criterion variables against which an ecologically valid study is to be designed.

Another approach is to ignore much of current practice and pursue a *prescriptive* strategy. Rather than being concerned with criticism or evaluation of current practice, we might attempt to design new procedures and components towards a better system. One example is Malpass & Devine (1981b) which attempted to show how identification performance could be improved after a long delay between witnessing an event (the vandalism in Malpass & Devine, 1981a) and the identification request. Witnesses given a guided memory interview five months after witnessing the vandalism showed superior correct identifications (60%) compared with witnesses who were merely asked to make an identification (40%). While the problem of long delays between witnessing a crime and an identification request came from the ecology of eyewitness identification, the approach to improving accuracy was based on psychological theory and research rather than an attempt to improve past police procedure. Another example is the effort of Wells, Leippe, and Ostrom (1979) to construct metrics for evaluating bias in lineups. We believe these prescriptive approaches should be encouraged, and that research programs which seek problems in the criminal justice ecology and look to psychological theory for the basis of their solution will in the long run be the most profitable.

We began with the idea that eyewitness identification research appears to be less relevant than desirable for the real problems of eyewitness identification in the criminal justice system, and that since the research has taken place almost exclusively in the laboratory we cannot know the degree to which our findings are in fact generalizable to the real world. Bray & Kerr (1979) have recognized similar difficulties in jury simulation research. They too have been concerned with the problems of external validity and the compromises inherent in seeking both generalizability and control. They point out that raising the question of generalizability ". . . does not settle it. This question cannot and should not be settled by intuition, but by research" (p. 115). We reported one study (Malpass, Devine, & Bergen, Note 2) which preserved a high degree of realism both in the events witnessed and in the subsequent identification lineups. The results lend support to the idea that realistic studies can alert us to mistaken emphases in the application of theory or in the interpretation of a problem taken from the natural social environment. We do not believe that laboratory studies on eyewitness identification in which "witnesses" know they are experimental subjects are of no value, or that "realistic" studies should dominate the literature. But we do need to know whether the results of nonrealistic studies and the theoretical analyses we work from survive the transposition from the laboratory to more realistic contexts. Unless we accomplish this we will continue to have a credibility problem.

The research strategy that we propose is for laboratory simulation studies to be modeled after realistic studies, which themselves are constructed to focus on ecologically valid problems grounded in an explicit theoretical analysis. Realistic studies would then become "benchmarks" against which comparisons would be made.

One implication of this is that realistic studies would be carefully planned, few in number, and carefully structured so as to reflect both legal and empirical issues. This seems appropriate, particularly in terms of the complexity of implementing such studies, the need to separate them from the university context and bring them to the wider world of people involved in crimes, and because of the ethical issues one confronts when conducting such realistic studies.

The important scientific question is whether laboratory simulations will yield results similar to those obtained in analogous realistic studies. If so, then variations on the simulations can be presumed to also yield results that are generalizable to realistic circumstances. If not, a second important question is whether the dimensions on which the simulation and the realistic study differ can be manipulated in another simulation so as to restore similarity of the results. For example, if a simulation study similar to our realistic study did not yield a pattern of choosing similar to that found under realistic conditions, one could not conclude that simulations are useless. Perhaps it is the case, as we have previously suggested, that simulations have inherently trivial consequences associated with the identification decision, and that this difference is responsible for the contrasting results. Were a way found to experimentally manipulate the values placed on different quadrants of the payoff matrix for subjects in the simulation so that they were patterned as in the realistic study, the results of the two studies might be similar. If they were, and if we were able to demonstrate empirically a bridge from laboratory simulations to realistic studies (and by inference to genuine criminal events), then lines of relevance drawn between eyewitness identification research and the context of its application would be considerably strengthened. The information afforded by the study of the relation between realistic and simulation studies is important both to eyewitness identification researchers and to the legal system. Either result of the comparison has the potential to reorient research strategies in this area.

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