1-1-2002

Where were you last night?: alibi believability and corroborating evidence : a new direction in psychology and law

Elizabeth Ann Olson
Iowa State University

Where were you last night?

Alibi believability and corroborating evidence: A new direction in psychology and law

by

Elizabeth Ann Olson

A thesis submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Psychology

Program of Study Committee:
Gary L. Wells (Major Professor)
Meg Gerrard
Veronica Dark
Roy Teas

Iowa State University

Ames, Iowa

2002

Graduate College
Iowa State University

This is to certify that the master's thesis of

Elizabeth Ann Olson

has met the thesis requirements of Iowa State University

Signatures have been redacted for privacy

TABLE OF CONTENTS

LIST OF FIGURES	iv
LIST OF TABLES	v
ABSTRACT	vi
INTRODUCTION	1
METHOD	22
RESULTS	28
DISCUSSION	41
REFERENCES	50
APPENDIX A: TAXONOMY OF ALIBI BELIEVABILITY	54
APPENDIX B: SAMPLE PARTICIPANT PACKET	55
APPENDIX C: ALIBI PERMUTATIONS	65
APPENDIX D: DEBRIEFING	69
ACKNOWLEDGEMENTS	70

LIST OF FIGURES

Figure 1. Model of the alibi process 7

Figure 2. Mean believability ratings as a function of corroborating evidence 32

Figure 3. Mean likelihood ratings as a function of corroborating evidence 36

Figure 4. Mean relevant trait rating as a function of corroborating evidence 38

Figure 5. Mean irrelevant trait rating as a function of corroborating evidence 39

LIST OF TABLES

Table 1. Correlations Between Dependent Measures 29

Table 2. Planned Multiple-Degree-of-Freedom Comparisons: Believability Measure 30

Table 3. Planned Single-Degree-of-Freedom Comparisons: Believability Measure 31

Table 4. Mean Alibi Belief as a Function of Evidence 32

Table 5. Mean Likelihood Rating as a Function of Evidence 36

Table 6. Mean Relevant Trait Rating as a Function of Evidence 38

Table 7. Mean Irrelevant Trait Rating as a Function of Evidence 39

ABSTRACT

This thesis discusses the definition of alibi, including the nature of evidence needed to support an alibi, and introduces a proposed taxonomy of alibi strength based on perceived believability. The taxonomy is composed of 12 entries represented by a factorial combination of four levels of *person* evidence and three levels of *physical* supporting evidence. Participants (N = 252) evaluated three alibis, with physical evidence as a within-subjects variable and person evidence as a between-subjects variable. Participants rated the alibis according to believability and the likelihood that the alibi provider was the culprit. They also rated the alibi providers on various trait descriptions. Alibis with stronger levels of physical or person corroboration were rated as more believable than alibis with no physical or person corroboration. Physical evidence moderated the effect of person evidence: As strength of physical evidence increased, the effect of person evidence diminished. Likelihood judgments and relevant trait ratings showed a similar pattern to believability judgments. Interestingly, trait ratings on irrelevant dimensions were also affected by alibi strength. Evaluators generally make distinctions among alibis along the lines of the proposed taxonomy, indicating high promise for the use of the taxonomy in future alibi research.

INTRODUCTION

Imagine a pair of police officers visiting your office, presumably "just to ask you a few questions." They ask you about what you were doing on a particular weekend several months before, and can you account for your whereabouts that whole weekend? No need to look in your planner or check any calendars, just tell us what you were doing and who you were with. Always the helpful citizen, you try your best to remember the weekend in question. After a bit of hesitation (accompanied by a meaningful glance between the two officers) you come up with a shaky recollection of that weekend. It had been nearing finals time, and you think you spent the weekend grading papers. You were at home the whole time, you tell the officers, and your spouse can vouch for you. "Was your spouse with you, physically with you, the whole time? Was there any period during which your spouse could be unsure of your whereabouts?" Well, now that you think about it, when grading papers you usually spread out in the sunroom while your spouse putters in the upstairs office. It dawns on you that the officers are looking at you suspiciously, and you finally ask what this visit is all about. You are informed that you are a suspect in a serious crime, and your alibi leaves a lot to be desired.

The above scenario portrays a situation familiar to nearly every American, especially fans of crime novels and movie thrillers: the provision of an alibi from the prime suspect in a criminal case. Like Harrison Ford in "The Fugitive," the innocent alibi provider in the above scenario is met with suspicion and disbelief by police and everyone who evaluates that alibi afterward. However, there may be many reasons why innocent people might not be able to come up with alibis or might come up with alibis that prove untrue. Central among these reasons is failure to remember or failure to remember correctly. Psychologists already have a basic, theory-driven

understanding of human memory that can be applied to the case of the innocent alibi provider, and the psychology of alibis provides great potential to researchers interested in human memory, judgments, decision-making, and the law.

There currently is no research literature on the psychology of alibis. In contrast, the eyewitness behavior research literature is rich and varied, with complex methodology, and grounds in several theoretical branches of psychology (Wells, 1993; Wells et al., 2000). The psychology of alibis is as potentially rich, and yet as barren of data, as the eyewitness behavior research area was twenty-five years ago; similarities between eyewitness testimony and alibis suggest an unrealized research potential for the psychology of alibis. Like eyewitness testimony, alibis rely at least in part on issues involving episodic memory. In the case of alibis, episodic memory is at issue not only for the alibi provider, but also for alibi corroborators. Questions about the accuracy of eyewitnesses and the conditions under which they are most and least accurate can also be asked about alibi providers and alibi corroborators. A major issue in eyewitness testimony concerns the perceived credibility of eyewitnesses and the persuasive impact of eyewitnesses (Wells, 1984). Similar questions can be asked about alibi providers; what are the conditions that lead people to believe alibis and how persuasive are alibis in general? These types of questions have been explored heavily in eyewitness research, but there is no such research literature on alibis.

Although there is parallelism between eyewitness testimony and alibis, there are also significant differences that are likely to have implications for both memory and credibility. For instance, while an eyewitness usually realizes at the time (or soon after) that a witnessed event is important to notice and recall, an innocent alibi provider is likely to have to recall an event that

was of no particular significance at the time. Interestingly, this could make the memories of the innocent alibi provider even less accurate in some ways than the memories of crime witnesses. Another major difference concerns the issue of honesty. In the case of eyewitness testimony, the presumption is that the witness is making a good-faith effort to tell the truth and errors are presumed to be the result of faulty perceptions or memory. In the case of alibis, on the other hand, there is no presumption of honesty. Hence, while an eyewitness might be believed based merely on uncorroborated recollection testimony, alibis are likely to require some form of corroboration such as physical evidence (e.g., a timed, dated receipt) or another person.

The justice system's procedures for handling eyewitness evidence are richly documented and recently codified (Technical Working Group for Eyewitness Evidence, 1999). However, the justice system's general attitude and procedures regarding alibis are far less well-known; indeed, alibi evidence is possibly one of the least thought about and discussed areas of crime investigation in law enforcement (Wells, personal communication, April 26, 2000). A company that offers training materials to police departments relies on intuitive, common-sense theories of memory and deception when recommending how police elicit and evaluate alibis (Reid & Associates, 2000). Psychology has unique tools to empirically examine lay theories about alibis and a unique perspective to better understand the generation and evaluation of alibis.

There are two general purposes of this thesis. First, there is an attempt to make a case for the scientific study of alibis. This part of the thesis is conceptual rather than empirical. In particular, the absence of an empirical literature on alibis is discussed and ideas are put forward regarding problems that might exist for the innocent alibi provider in terms of accurately recalling and then finding external proof for the alibi. Problems such as inconsistent or changed

alibis that result from initial errors in recall are postulated and the need to estimate the rate at which such problems plague the innocent alibi provider is described. Several ideas are put forward for experiments that might shed light on the alibi generation and evaluation process. The second purpose of this thesis is empirical: to propose and test a taxonomy of alibis. Future work, which might require innocent people to recall and then prove an alibi, will need a taxonomy for classifying the alibis that are generated. Thus, it is argued that the taxonomy that is proposed and tested in this thesis is an essential first step in setting the stage for the scientific study of alibis.

What Is an Alibi?

Merriam-Webster's Dictionary (1993) defines an alibi as "1: a plea of having been at the time of the commission of an act elsewhere than at the place of commission; 2: an excuse usually intended to avert blame or punishment." I should note that definition number two is not what I intend to use as a definition of alibi; rather, the definition of alibi most relevant for this paper is that from Black's Law Dictionary (1990), which states that an alibi is "a defense that places the defendant at the relevant time of the crime in a different place than the scene involved and so removed therefrom as to render it impossible for one to be the guilty party."

Episodic memory is an important process in the generation of the memory statement portion of an alibi. One quality that makes an alibi unique among memory statements is that an alibi has a peculiar time-space component—the alibi must speak to both the time of the crime and the space the alibi provider was occupying. Any evidence offered in support of the alibi must also speak to both those dimensions. Most episodic memory statements do not need to be so specific, and the average person does not recall his or her past with the specter of imprisonment hanging about. Another difference between an alibi and an everyday memory account is a

difference in the "climate of disbelief." Unlike the situation facing a crime suspect, the everyday memory accounts that most people give are (a) not subject to incredible scrutiny, (b) not demanding of hard proof, and (c) not being elicited by a professional interrogator. How many everyday memories would actually fail if they required physical or credible-person proof of their account? McCloskey, Wible, and Cohen (1988) provide anecdotal evidence that people who may be counted on as person-proof for an alibi may not be as reliable as an alibi provider may hope. In their study of "flashbulb memories" for the Challenger shuttle disaster, McCloskey and his colleagues relate that at an informal seminar after the study, several participants tried to corroborate their own memories, and the people they had remembered being with claimed they were elsewhere that day. If these kinds of inconsistencies occur with supposedly powerful "flashbulb" memories, how much more vulnerable to inconsistency are alibi witnesses' memories of what for them was likely a normal, everyday interaction?

It is easy to imagine the guilty fabricating alibis; indeed, in the late 1800's in the United States the alibi defense was known as the "rogue's defense" (Gooderson, 1977). Few can argue that an alibi defense, if proven true, has a strong potential for exoneration. Yet there are types of untruthfulness of an alibi, and it is useful to differentiate among these types. A true alibi is one in which the alibi provider gives an accurate account of his or her whereabouts. An untrue alibi, on the other hand, may be either of two types: fabricated or mistaken. A *fabricated* alibi is deliberately false, due to the guilt of the provider or from a provider unwilling to reveal the truth because of its embarrassing nature (e.g., the alibi provider was actually with his mistress). A *mistaken* alibi is given initially as fact—the alibi provider believes that it is true. It turns out,

however, that the alibi provider was actually somewhere else—the alibi provider misremembered, but is nonetheless innocent of the crime.

The most psychologically interesting alibi situation is that of the mistaken alibi, and this thesis will focus mostly on the situation of the innocent alibi provider. Of course, fabricated alibis also involve memory, but it is memory for keeping track of deceptions, which is fundamentally different than an innocent, commonplace memory failure that could have serious consequences. A mistaken alibi could be given in one of three contexts: 1) the provider misremembers an alibi story and continues to believe in the veracity of the story despite any evidence to the contrary (e.g., a corroborator remembers the situation differently); 2) the provider recalls incorrectly, realizes the mistake at a later time, and attempts to correct the alibi (a *mutated* alibi); or 3) the alibi provider initially cannot remember and later provides an alibi.

Do evaluators differentiate between mistaken and fabricated alibis? Or do they, as Arthur Will (1896) recommended, use an untrue alibi as incriminating evidence against the accused? A broad characterization of the eyewitness literature is that evaluators (e.g. jurors, mock jurors) believe episodic memory to be better than it actually is (Lindsay, Wells, & Rumpel, 1981). Coupled with the evaluator's assumption that an eyewitness has no reason to lie, it is no wonder that mistaken identifications are the primary cause of conviction of the innocent—the only explanation in the evaluator's mind for the identification is that it was an accurate one (Wells et al., 1998). To the extent that evaluators overestimate the memory capabilities of people, we might expect alibi evaluators to readily assume that an untrue alibi, especially a mutated alibi, is the result of deliberate lying and a sure sign of guilt. The idea of an honestly mistaken alibi is not a salient alternative explanation. In general, then, we might expect alibi evaluators to be

insensitive to the idea that there are two kinds of untrue alibis, one indicating deception and the other signifying mere misremembering.

The Alibi Process

Developed for purposes of this research is a model of the alibi process (see Figure 1). The model notes two general domains of alibis, namely the generation domain and the believability domain.

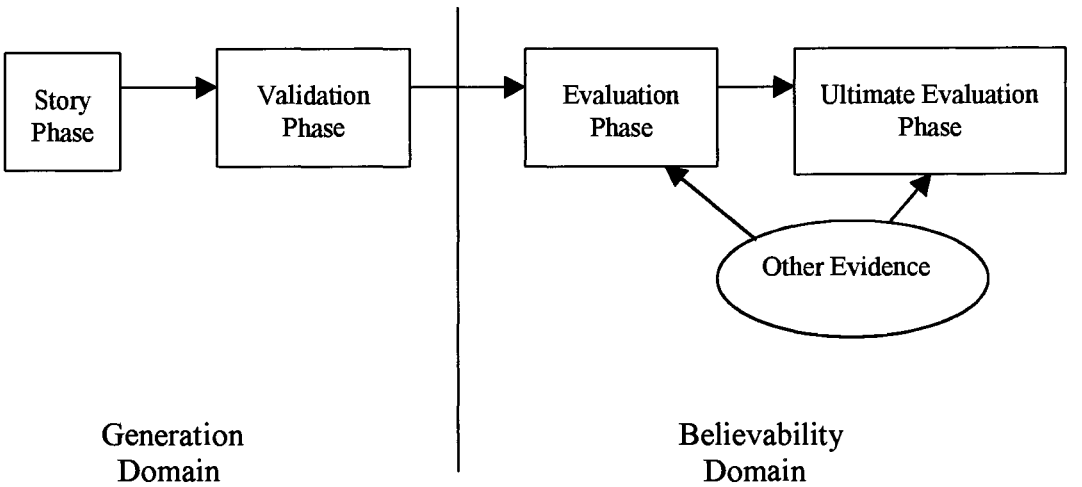

Figure 1. Model of the alibi process.

The *generation domain* involves two phases. The first phase is the *story phase*, in which the alibi provider gives a verbal account of his or her whereabouts at the time of the crime. The second phase, the *validation phase*, involves corroboration of the story through the generation of physical or person evidence. The *believability domain* involves the third and fourth phases in the process. In the third phase, the *evaluation phase*, the truthfulness of the story itself is evaluated. In the final phase, the *ultimate evaluation phase*, a definitive determination is made as to whether

the accused actually committed the crime. These latter two phases are not identical. One can find the alibi story is not true in the evaluation phase and still ultimately believe that the accused is innocent of the offense (e.g., when one assumes that the accused misremembered his or her whereabouts or lied to cover for someone else or to avoid admitting an impropriety such as an extramarital affair). Conversely, one cannot believe the alibi is true and yet ultimately believe that the accused is guilty of the offense; in this direction the two are mutually exclusive.

Alibi generation. Alibi generation includes within it issues of memory—autobiographical memory for where the alibi provider was at a certain time and place. Demographic variables may play a large role in a particular person's ability to generate a believable alibi; for example, people who are unemployed and who live alone are more likely to have a very poor alibi than are employed, married people. Interacting with memory and demographics in alibi generation is time—the longer the time between now and the time for which a person is asked to provide an alibi, the less likely it is that the person will remember or will have physical evidence. Also important is the time frame for which an alibi must be provided: It is far easier to have a solid alibi for a specific, short time interval (15 minutes) than to account for a long time span (six hours).

The initial phase within alibi generation is the story phase, during which the alibi provider delivers the memory statement of what he or she was doing. This is the claim or plea that he or she was elsewhere from the scene of the crime. During the generation of this plea, the innocent alibi provider is vulnerable to several of what Schacter (1999) has termed "sins of memory." The alibi provider may commit "sins" of omission: transience or absent-mindedness. Transience involves decreasing accessibility of memories over time; thus, the provider is less

likely to remember what he or she was doing on the particular day in question when that day was long ago. Absent-mindedness refers to shallow encoding or processing of events or activities, and this is especially likely when events are routine. The innocent alibi provider may assume the day in question was simply another routine day and may answer accordingly. The alibi provider may also commit a sin of commission: misattribution. The innocent alibi provider may remember an event correctly, but misattribute that event to the day in question when in fact it happened on another day or at another time. I would expect that, in the context of giving an alibi, the innocent alibi provider would be motivated to be accurate about the source of his or her memory, although misattributions might occur even under stringent search criteria (Johnson, Hashtroudi, & Lindsay, 1993).

Next, the alibi goes through a validation phase, during which the memory statement is corroborated with physical or person evidence (or perhaps both). Alibi validation can be undertaken by the alibi provider or by others (police investigators, for example). This phase is what determines the true strength of the alibi, for although the memory statement is certainly tied to the types of evidence one thinks he or she can produce, it is the actual production of the corroborating evidence that gives the alibi its base. This phase can contain unique difficulties for the alibi provider: Corroborating evidence could prove extraordinarily elusive. Physical evidence, especially that which the provider has no control over (like security tapes), can be destroyed or lost. Person evidence is equally fragile; any potential corroborator is subject to the same sins of memory as the alibi provider. How guilty would an innocent alibi provider look if his or her corroborating person remembered the time in question differently?

After the first two phases in the process, the alibi now consists of both the memory statement and the evidence produced to support that statement.

Alibi believability. The process now moves into the domain of believability of alibis: an alibi's strong potential to exonerate motivates the alibi provider to produce a credible alibi and motivates alibi evaluators to determine the truth or untruth of the alibi. Alibi evaluators should process alibi information deeply and elaborately (Craik & Lockhart, 1972). The alibi itself is a part of the puzzle of the crime and evaluators are then motivated to make an accurate evaluation, especially when the evaluators are expecting to make serious decisions involving the alibi provider, such as police investigators deciding whether to put their investigative resources into one of a number of possible suspects.

As in the generation domain, demographic variables may also play a significant role in the believability domain. For example, evaluators may perceive employed, distinguished members of the community as inherently more believable and likeable than unemployed former criminals. This could have serious implications for how credible the evaluator deems the alibi. According to Heider's (1958) balance theory, people tend to want to maintain similar feelings toward a person and things associated with that person. In the case of an alibi situation, the evaluator (e.g., a police investigator) would likely have some initial feelings toward the alibi provider based on a first impression. Suppose an investigator interviewing a well-dressed business owner has a fairly positive initial impression of the person. Balance theory would predict that the investigator would then want to view the business owner's alibi in a favorable light, thus maintaining a balanced configuration. Conversely, suppose that same investigator then interviews a disheveled, unemployed ex-con. The investigator might have a negative impression

of this second interviewee, and to keep balance in this configuration, the investigator would tend to view the ex-con's alibi in an equally unfavorable light. In these two disparate situations, the exact same alibi (perhaps "I was home alone") could be evaluated very differently.

The third phase is the evaluation phase, which involves the evaluation of the credibility of the alibi and can involve many people, including police, judges, and laypersons. Police investigators are the first to solicit and evaluate alibis; they see and hear the alibi in its most raw, earliest state. Judges, lawyers, and laypersons generally will come into contact with an alibi after it has gone through some retellings, and it could be more polished. Each evaluator might approach the alibi from a different perspective and might evaluate the alibi with a different goal in mind. This research asks evaluators to take the role of a police detective. For purposes of determining the *relative* believability of an alibi, asking an evaluator to take the role of a judge or a detective should make little difference. However, future research could explore possible evaluator-role differences in greater detail. For purposes of the current research, the evaluation phase is the most strongly relevant phase of the process. This phase can be influenced by many factors, and psychology can provide some clues as to what might happen in this phase of the process.

There appears to be a near total absence of an empirical literature regarding what an alibi evaluator actually does when examining an alibi. Nor does anyone know how evaluators *should* go about evaluating alibis. However, hypotheses about how evaluators examine alibis can be informed by research into how people generally go about believing ideas.

Many modern philosophers, beginning with Descartes, believed that comprehension of an idea is a passive, effortless process, distinct from belief, or evaluation of the truth of an idea. To

Descartes, comprehension and perception are the same: one may have (and by definition, comprehend) an idea of something not physically present, or one may generate an idea from the perception of something in the physical environment. Just as an object imprints an image into soft wax, an idea can imprint onto the human mind, or intellect; just as the wax does nothing to receive an object's imprint, the mind does nothing to comprehend an idea. Belief, or "assent" in Descartes' terms, requires action by the will, or *voluntas*, to deem an idea true or false. This requires that the person consider an idea effortfully before judging its veracity. The distinction between comprehension and belief is rooted firmly in Descartes' notion of free will: "We nonetheless experience within us the kind of freedom which enables us always to refrain from believing things which are not completely certain and thoroughly examined" (1644/1985, p. 194). This principle is a major theme throughout Descartes' philosophy: "That there is freedom in our will, and that we have power in many cases to give or withhold our assent at will, is so evident that it must be counted among the first and most common notions that are innate in us" (1644/1985, p. 205).

Baruch Spinoza, in contrast, did not agree with Descartes' notions of how comprehension and belief operate. He argued that comprehension and assessment, idea and belief in that idea, will and intellect are one and the same. According to Spinoza, the mind cannot comprehend an idea without at least implicitly believing it to be true in the instant that understanding occurs: "For what is it to perceive a winged horse, other than to affirm wings of a horse? For if the mind were to perceive nothing other than a winged horse, it would regard the horse as present to it…" (1677/2000, p. 160). However, he did not claim that we must always be forced to believe every idea we have; rather, we go through a second step in which we use other knowledge that would

cause us to doubt that belief and we would mark that belief or idea as false only when the "imagination of the winged horse were joined to an idea which takes away the existence of that horse, ...Then it will either necessarily negate the existence of the horse, or it will necessarily doubt it" (1677/2000, p. 160). Bennett (2001) proposed that Spinoza was working toward a view that has been more fully examined by several present-day philosophers: the basic mentally available raw materials that humans get in sensory encounters with the world—and in realistic imaginings—are *beliefs* about the environment or *inclinations to believe*.

But which operation is correct? What does the human mind actually do? Recently, Gilbert (1991; 1993; Gilbert, Krull, & Malone, 1990) has argued that the human mental system is Spinozan in nature, that comprehension of an idea is simultaneous with acceptance of that idea. The mind must then make the effort to disbelieve the idea, or "unaccept" it, and until the mind has the chance to unaccept an idea, it behaves as if that idea were true (Gilbert et al., 1990). Gilbert (1991) provided an impressive set of observations from social, cognitive, and developmental psychology to support the Spinozan view that comprehension and acceptance are simultaneous.

An implication of this view is that even obviously false statements (e.g., the sun is square) are initially accepted as true. Starting points matter in later evaluations because they serve as an anchor from which adjustments are not fully sufficient (Tversky & Kahneman, 1974). The Spinozan idea that acceptance is the starting point in comprehension can account for why negation (e.g., Bob Dole did not sing in the Super Bowl halftime show) produces a lingering, underlying belief that the event is nevertheless true.

How might the Spinozan view relate to the perceived credibility of alibis? One possibility is that the alibi is initially accepted as true at the time of comprehension. If adjustments to belief of the alibi are made from a point of acceptance, then this would favor the alibi provider and lead to a bias to accept alibis as true. On the other hand, the very concept of alibi might elicit a different process in which the starting point is that the alibi provider is attempting to cover for his or her role in the crime and is lying. This need not be inconsistent with the Spinozan view. Simply asking someone for an alibi implies that the person was, or could have been, at the scene of the crime. Hence, the perceiver's initial comprehension of the situation might be "alibi provider is lying." Ironically, this might be especially likely if the alibi provider begins by denying being at the scene of the crime rather than asserting he or she was elsewhere, because saying "I was not there" includes with it the underlying positive "I was there." Research experiments might be able to distinguish between these accounts of how people evaluate alibis by placing evaluators under cognitive load or forcing premature output (see Gilbert, Tafarodi, & Malone, 1993). If alibi evaluators believe the alibi more under cognitive load or when premature output is forced, the starting point must be acceptance of the alibi and the implied premise that the alibi provider is telling the truth. If alibi evaluators believe the alibi less under cognitive load or when premature output is forced, the starting point must be acceptance of the implied premise that an alibi provider is lying.

Kelley (1972) posited that the perceived role of an explanation for a behavior is discounted (given less weight) if other, additional explanations are present or can be imagined. In the case of an alibi, one salient explanation for the alibi is that the alibi provider is giving a factual account of his or her whereabouts. A salient alternative explanation is that the alibi

provider is covering for his or her role in the crime and is attempting to avoid punishment—the "alibi provider is lying" explanation. Wells and Ronis (1982) found that the number of additional explanations for a behavior is not so important to an evaluator's attribution of why the target committed the behavior as the total strength of those explanations. The "alibi provider is lying" explanation may be potent enough that the evaluator discounts significantly the believability ascribed to even a true alibi.

Wegner, Wenzlaff, Kerker, and Beattie (1981) offered another insight into why alibis may be unfavorably evaluated: the innuendo effect. The innuendo effect is most often seen in evaluations of people about whom the evaluator has seen damaging personal information disguised as hints or questions in newspapers or on television. Unbeknownst to the evaluator, this damaging information continues to exert influence on the evaluator's judgments of the target. In Wegner et al.'s (1981) research, participants who saw incriminating innuendo became as negative toward the target as did those who saw directly incriminating statements. Wegner and his colleagues noted that innuendo effects would likely surface in any communication context similar to their experimental situation, one with a "highly charged atmosphere of evaluation" and "lack of prior audience knowledge of the target." The alibi situation is an example of one of these communication contexts; that is, the alibi is communicated in an atmosphere of evaluation, and, depending on the evaluator, the audience (especially a judge or jury) generally has little or no prior knowledge about the alibi provider. The mere fact that the alibi provider has been singled out and asked for an alibi is in itself damaging information about that person. In fact, the event of providing an alibi may be a no-win situation: If someone directly requested that you give an alibi, your suspect status is at least implicit in the request—an

innuendo effect; the only thing that might make you seem even more suspicious is if you provide an alibi in the *absence* of a request to do so (Yandell, 1979).

Finally in the alibi process, if a case makes it to trial and an alibi is presented in court, it undergoes an ultimate evaluation phase, where a jury or judge determines the ultimate "truth" of the alibi. This phase is distinct from the evaluation phase. In the evaluation phase, the evaluator may not be aware of all the evidence offered in support of the alibi or of all the other facts in the case. However, the ultimate evaluation phase entails a formal presentation of the alibi in the context of the entire case, and evaluators at this phase *are* aware of all evidence offered in support of the alibi as well as other facts of the case. Ultimate evaluation will likely be affected by other types of evidence surrounding the case, such as other physical evidence, eyewitness accounts, or the type of crime committed. However, for the sake of simplicity, this thesis will only investigate the believability of alibi evidence without manipulating extra-alibi evidence.

A Taxonomy of Alibis

In order to study alibis scientifically, there needs to be some kind of taxonomy to impose order on the many forms that alibis take. Some alibis, for instance, are nothing more than mere pleas that one was elsewhere at the time of the crime with nothing but the plea itself to substantiate the claim. Other alibis might be inherently imbued with irrefutable corroborative proof that does not rely at all on the trustworthiness of the alibi provider (e.g. the alibi provider was delivering a nationwide live television broadcast at the time of the crime). What kind of organizing structure can be brought to bear on the various forms that alibis can take?

Although there are likely to be many possible systems for a taxonomy of alibis, it might be most useful to have a system in which the taxonomy is arranged along a continuum of

believability. A "believability taxonomy" for alibis makes sense because believability is the primary dimension along which people evaluate alibis. Although alibis might vary in several qualitatively different ways (e.g., type of corroboration, consistency, distance from the scene, time frame, complexity), the underlying dimension of believability is central to the core judgments made by criminal investigators, prosecutors, judges, and juries. Also, believability is a measurable characteristic with continuous variable properties.

The development of an initial taxonomy of alibis was the first step in the current research. This research will, in turn, result in a refinement of this taxonomy. Hence, the taxonomy is only a working draft at this point. In fact, the primary purpose of the current research is to evaluate and refine this taxonomy, which appears to be the first taxonomy of alibis in the psychological literature. It is important to note that there is no way to have a taxonomy of the "absolute level" of believability of alibis. Alibis will always combine with other evidence not directly related to the alibi (e.g., fingerprints, prior criminal records, motives) in how they map onto beliefs about the alibi provider and the crime in question. However, if non-alibi evidence is held constant, the *relative believability* of alibis can be studied within the taxonomy.

The taxonomy offered here utilizes combinations of the type of supporting evidence (physical versus person evidence) and the perceived ease with which it can be fabricated or in error. For instance, physical evidence could be perceived as rather easily fabricated (e.g., a store receipt) or difficult to fabricate (e.g., a timed/dated security video showing the person elsewhere). Similarly, person evidence supporting the alibi (other persons who will corroborate the story) may be perceived as rather easily fabricated (e.g., one's mother or spouse) or difficult to fabricate (e.g., a federal judge with whom the person was playing golf). Fabrication of

evidence by a corroborator captures one dimension of communicator credibility, trustworthiness, identified by Hovland, Janis, and Kelley (1953). Trustworthy person evidence should be perceived as having a low likelihood of fabrication; the corroborator has no ostensible motivation to lie for the alibi provider. Easily fabricated person evidence comes from a person untrustworthy because of his or her relationship to the alibi provider: someone who has a motivation to keep the alibi provider out of trouble and thus a motivation to lie for that person.

Hovland et al. (1953) also identified a second dimension of communicator credibility, expertise, which I believe alibi evaluators may not realize operates in this situation. Corroborators close to the alibi provider are not likely to mistake that the provider was the person they were with at the time; they are highly familiar with the provider, and familiar others are "experts" at recognizing that person. On the other hand, a stranger who would corroborate an alibi is essentially making an eyewitness identification, which runs the risk of being a mistaken identification.

The person evidence is complicated somewhat by the idea that the corroborating person could either be lying or genuinely mistaken. For instance, a ticket taker at a theatre might testify that the accused was one who attended a movie at the time in question. This might be a mistaken identification, but the ticket taker has no motive to lie. Mistaken identification is not likely for the accused's sister, but she has a potential motive to lie (a discounting possibility) based on her relation with the accused. Perhaps the most believable person evidence would come from someone who knows the accused well enough that mistaken identification is unlikely, but has no motive to lie (i.e., a non-motivated familiar other). However, even the non-motivated familiar-other person has the capacity to misremember the time in which he or she saw the accused.

Although there is no empirical work on alibis per se, there is one experiment that offers some initial support for the idea that evaluators will view types of person evidence differently. In an attempt to assess the power of eyewitness evidence, Lindsay, Lim, Marando, and Cully (1986) investigated how witnesses for the defense stacked up against eyewitnesses for the prosecution. In Experiment 2 they varied the nature of the defense testimony: the defense witness was either an alibi witness or was an eyewitness who simply contradicted the prosecution's witness and said that the defendant was not the culprit. They also varied the relation of the alibi witness to the defendant; either the witness was a complete stranger or was the defendant's brother-in-law. Both the non-identification witness and the stranger alibi resulted in guilty-vote rates of 27%. However, the rate of guilty votes in the brother-in-law alibi condition was very similar to the rate of guilty votes in the condition with one unopposed prosecution witness (57% and 60%, respectively). Participants in this experiment rated an alibi from a non-motivated stranger to be stronger evidence for the defendant's innocence than an alibi from a motivated familiar other. Although this experiment was conducted primarily to assess questions surrounding eyewitness evidence in general, it provides some support for types of strength of person evidence and indicates initially how those types might be rank ordered.

The proposed taxonomy is shown in Appendix A. This taxonomy results from a factorial combination of three types of physical evidence (none, easily fabricated, difficult to fabricate) with four types of person evidence (none, motivated familiar other, non-motivated familiar other, non-motivated stranger). It was expected that physical evidence and person evidence would interact to create varying degrees of alibi strength. It was also expected that evaluators would not differentiate between non-motivated strangers and non-motivated familiar others and would

attribute both levels of person evidence approximately equal credibility. The difference between these two types of person evidence is a memory issue—essentially the corroborator's recognition memory for the alibi provider. The extant literature on eyewitness identification suggests that people are not particularly sophisticated in the way that they evaluate eyewitness identification testimony (Wells, 1984). Many variables that have an impact on the accuracy of eyewitness identification have little or no impact on the credibility that observers attribute to that testimony. Hence, it was expected that the alibi evaluators in this study would attribute approximately equal credibility to the non-motivated stranger alibi witnesses and the non-motivated familiar-other alibi witnesses, even though the chances of a mistaken identification by the alibi witness should be higher in the former case than the latter. Lastly, the difficult-to-fabricate physical evidence is likely very powerful, so all four types of alibis that included difficult-to-fabricate physical evidence were given the highest weights of alibi strength in the taxonomy.

Clearly, the twelve levels of alibi strength in this taxonomy are going to be sensitive to the specific ways in which they are operationalized. A motivated familiar other who is a community leader is going to be perceived as more believable than will a motivated familiar other who is a previously convicted felon. A non-motivated stranger who only caught a glimpse of the accused is not the same as one who spent hours with the accused. Furthermore, there is some arbitrariness (and a bit of circularity) to categorizing some forms of physical evidence as easy to fabricate and other physical evidence as difficult to fabricate. Nevertheless, the dearth of any systematic work on the psychology of alibis leaves unanswered the fundamental question of whether people make any of the distinctions that are presumed to exist within this taxonomy. Note as well that the near-total absence of any data on the believability of alibis leaves open the

fundamental question of whether or not the idea of a continuum of this sort makes sense. Perhaps, for example, alibis are either believed or not (because the person either did or did not commit the crime and the entire ordeal seems dichotomous). By varying alibis along the two dimensions of person and physical evidence and then measuring believability on a continuous scale, the viability of a taxonomy of this sort can be tested.

Hypotheses

First, it was expected that participants would make distinctions among the levels of person evidence and among the levels of physical evidence, and that these distinctions would fall along the lines of the proposed taxonomy: Participants would rate more difficult-to-fabricate evidence (either person or physical) as more believable. Also, it was hypothesized that people are relatively insensitive to the distinction between non-motivated strangers and non-motivated familiar others. Lastly, difficult-to-fabricate physical evidence is probably more powerful than any person evidence that could be provided, and it should overwhelm all other alibi evidence. As a result, it was predicted that there would be no effect across levels of the person evidence at the difficult-to-fabricate level of the physical evidence.

METHOD

Participants

Participants included 252 undergraduate students from a large Midwestern university, recruited for an experiment titled "Police Detective Reasoning Skills." Participants were randomly assigned to condition and awarded extra credit in psychology classes for their participation. All participants were treated in accordance with the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 1992). According to Cohen's (1988) conventions, the current study can detect, at power = .80, a medium effect size at $\alpha = .01$ for the between-subjects conditions.

Design

The experiment was a 4 (Person Evidence) x 3 (Physical Evidence) mixed factorial design. Presentation of physical evidence was manipulated within subjects, and presentation of person evidence was manipulated between subjects. Because participants viewed three alibis within one level of person evidence, it was necessary to create three exemplars for each category of person evidence to reduce suspicion and to alleviate stimulus sampling concerns (Wells & Windschitl, 1999). For example, the exemplars for the motivated familiar other category were mother, brother, and best friend, while the non-motivated stranger category included a grocery store cashier, a bookstore clerk, and a taxi driver.

The order of the within-subjects physical evidence manipulation was counterbalanced so that each level of physical evidence occurred equally often in the first, second, and third alibis. For instance, one participant might see alibis with no physical evidence, easy-to-fabricate physical evidence, and difficult-to-fabricate physical evidence, in that order. Another participant

might see alibis with difficult-to-fabricate physical evidence, no physical evidence, and easy-to-fabricate physical evidence, in that order. Likewise, the order of exemplars was counterbalanced so that each exemplar appeared equally often in the first, second, and third alibis, as well as equally often with each level of physical evidence. Returning to the above example and using the motivated familiar-other person evidence category, the first participant would receive "mother" paired with no physical evidence, "best friend" paired with easy-to-fabricate physical evidence, and "brother" paired with difficult-to-fabricate physical evidence. The second participant would see "mother" paired with difficult-to-fabricate physical evidence, "best friend" paired with no physical evidence, and "brother" with easy-to-fabricate physical evidence. Thus, the exemplar order for these two participants is the same, while their physical evidence order is different. Other participants received the same order of physical evidence but a different order of exemplars, and so on.

Materials

Stimulus materials. Stimulus materials included one fabricated crime scenario in the form of an initial police report on an armed robbery at a convenience store and a follow-up report explaining the need to evaluate suspects' alibis (see Appendix B for an example of a complete participant packet). Short alibi reports were created using each of the three exemplars in the four categories of person evidence in the taxonomy. Each exemplar was modified slightly to accommodate each of the three levels of physical evidence (see Appendix C for all 36 alibis used). For instance, using the motivated familiar-other person evidence category, one participant might see the first alibi with the "mother" exemplar paired with no physical evidence:

> Suspect C. Z. claimed that he was meeting his mother at the airport north of the city on the evening in question. The suspect said that he had met his mother at the gate at approximately 8 pm, and accompanied her to the baggage claim. The mother was contacted and confirmed that the suspect met her at the gate and was with her the rest of the evening. Suspect does not own a gun.

The second alibi would be "best friend" paired with easy-to-fabricate physical evidence, operationalized as a cash receipt:

> Suspect A. M. claimed he was at his friend's house all night on the evening in question. He said that he was there from about 4:30 in the afternoon until approximately 9:00 pm. Suspect also provided a pizza delivery receipt, paid in cash, delivered to the friend's home at 8:07 pm. A statement from the friend was taken. The friend believed that the evening in question was the evening A. M. was there. The friend lives in the central city area. Suspect does not own a gun.

The third alibi the participant sees might then be "brother" paired with difficult-to-fabricate physical evidence, operationalized as a security video:

> Suspect B. L. said he was entertaining his brother on the evening in question. He said that they were shopping at the mall on the west side of the city. A statement from the brother was taken; the brother claimed they had been in the mall for the entire time between 7:30 and 8:30 pm. Security camera video from the mall shows the suspect in the main lobby area at 7:48 pm. Suspect does not own a gun.

A second participant might see a set of alibis, also from the motivated familiar-other person evidence category, with the same exemplar order but a different physical evidence order, in

which case the alibis would appear as follows: the first alibi would now have "mother" paired with difficult-to-fabricate physical evidence:

> Suspect C. Z. claimed that he was meeting his mother at the airport north of the city on the evening in question. The mother's plane arrived at 7:55 pm. The suspect said that he had met his mother at the gate, and accompanied her to the baggage claim. The mother was contacted and confirmed that the suspect met her at the gate and was with her the rest of the evening. Security camera video from the airport shows the suspect going through the metal detectors at 7:32 pm. Suspect does not own a gun.

The second alibi would have "best friend" paired with no physical evidence:

> Suspect A. M. claimed he was at his friend's house all night on the evening in question. He said that he was there from about 4:30 in the afternoon until approximately 9:00 pm. A statement from the friend was taken. The friend believed that the evening in question was the evening A. M. was there. The friend lives in the central city area. Suspect does not own a gun.

Lastly, the third alibi the participant sees would contain "brother" paired with easy-to-fabricate physical evidence:

> Suspect B. L. said he was entertaining his brother in his home on the west side of the city on the evening in question. He said they had ordered pizza and provided a pizza delivery receipt, paid in cash, timed 8:07 pm. A statement from the brother was taken; the brother claimed they had been in the home for the entire time between 7:30 and 8:30 pm. Suspect does not own a gun.

Dependent measures. For the primary dependent measure, participants rated each alibi on an 11-point Likert-type scale of believability (0 = I do not believe him at all, 10 = I believe him completely) immediately after reading each alibi. As mentioned earlier, believability is the primary dimension along which the taxonomy is based, which renders this measure closest to the underlying construct of the taxonomy.

Participants also rated on an 11-point Likert-type scale the probability that the suspect is the one who committed the crime (0 = totally unlikely, 10 = he is certainly the gunman) after reading each alibi. This likelihood judgment was not considered a primary measure of believability because it does not focus on the alibi itself; rather, such a judgment could evoke a broad range of considerations, such as the number of other suspects or the absence of other evidence.

Participants also rated each alibi provider on twenty traits, ten of which related to honesty (e.g. deceitful) and ten that were irrelevant (e.g. funny). Traits were rated on a 7-point Likert-type scale (1 = does not describe this suspect at all, 7 = describes this suspect perfectly). It was expected that ratings of the traits related to honesty should vary systematically according to the strength of the alibis presented, whereas ratings of irrelevant traits should not be affected by the alibi presented.

After participants had read and rated each alibi individually, they were asked open-ended, exploratory questions about what made them believe and disbelieve the alibi. These open-ended questions were intended as possible fodder for future research questions about alibis, and they were not intended as dependent measures for this thesis. Lastly, participants were asked to rank order the three suspects they evaluated—which suspect is the most likely to be the culprit? This

measure was included to prevent participants from rating all three alibis as equal and to force them to directly compare the three alibis.

Procedure

One crime scenario, consisting of an initial crime report and a follow-up report, was given to all participants upon arrival at the study. Participants were then asked to assume the role of detective and evaluate the alibis of six suspects, which were given in supplemental police reports. In actuality, participants were only given three alibis to evaluate; this was done to help prevent order effects. If participants believed they were approaching the last of the possible suspects, they may have injected some strategy (e.g., I didn't think it was any of the others, so it must be this one) into their decision, rather than evaluating the alibi itself.

After participants finished evaluating their three alibis, they were fully debriefed, thanked, and dismissed (see Appendix D for the debriefing).

RESULTS

No participants were eliminated from the data. It was expected that participants would differentiate among types of physical evidence and types of person evidence, with some alibis rated as more believable than others. Also, it was hypothesized that physical evidence and person evidence should interact: the effect of different levels of person evidence should be diminished as the strength of physical evidence increases. It was predicted that non-motivated strangers would be perceived as equally credible as non-motivated familiar others; participants would not appreciate the memory issue that distinguishes the two. Also, it was hypothesized that difficult-to-fabricate physical evidence would be powerful evidence and would overwhelm all person evidence with which it may be combined, resulting in no effect across levels of person evidence for difficult-to-fabricate physical evidence.

Overview of Analyses

All dependent variables were analyzed with a 4 (Person Evidence) x 3 (Physical Evidence) mixed ANOVA, with the former as the between-subjects variable and the latter as the within-subjects variable. All tests involving within-subjects factors were multivariate tests that do not assume sphericity. The dependent measures were correlated as expected (see Table 1). Believability was negatively correlated with likelihood judgments, relevant trait judgments, and irrelevant trait judgments. This is reasonable because believability is the only favorable judgment that evaluators made about alibi providers; the likelihood and trait judgments carried a negative connotation. Also as expected, likelihood was positively correlated with relevant and irrelevant trait judgments.

Table 1. Correlations Between Dependent Measures

	Believe	Likely	Relevant Traits	Irrelevant Traits
Believe	1.00	-.56**	-.56**	-.24**
Likely		1.00	.67**	.29**
Relevant Traits			1.00	.35**
Irrelevant Traits				1.00

**Significant at $p < .01$ (2-tailed)

Because the believability dependent variable is the primary measure in this research, all analyses concerning believability are reported first and the believability measure was subjected to the most thorough analyses (14 planned comparisons, corrected using the Bonferroni correction). Seven of these comparisons are multiple-degree-of-freedom tests representing the seven possible simple main effects in the design; these are shown in Table 2. Five comparisons are pairwise contrasts, and the remaining two are single-degree-of-freedom interaction tests, and Table 3 depicts the contrast coefficients for these comparisons. After reporting results on the believability measure, results are reported on the 4 x 3 mixed ANOVA for each of the remaining measures (likelihood, relevant traits, irrelevant traits).

The Belief Measure

Alibi believability was measured on an 11-point Likert-type scale (0 = I do not believe him at all, 10 = I believe him completely) in response to the question, "How much do you believe this suspect's alibi?" Table 4 shows means and standard deviations for the believe question according to condition.

Table 2. Planned Multiple-Degree-of-Freedom Comparisons: Believability Measure

	Comparison						
Physical Evidence/Person Evidence	1	2	3	4	5	6	7
None/None	x			x			
None/Motivated Other	x				x		
None/NM-Familiar Other	x					x	
None/Stranger	x						x
Easy to Fabricate/None		x		x			
Easy to Fabricate/Motivated Other		x			x		
Easy to Fabricate/NM-Familiar Other		x				x	
Easy to Fabricate/Stranger		x					x
Difficult to Fabricate/None			x	x			
Difficult to Fabricate/Motivated Other			x		x		
Difficult to Fabricate/NM-Familiar Other			x			x	
Difficult to Fabricate/Stranger			x				x
Significant at $p < .05$ using Bonferroni correction:	*			*	*	*	

Table 3. Planned Single-Degree-of-Freedom Comparisons: Believability Measure

	Comparison						
Physical Evidence/Person Evidence	1	2	3	4	5	6	7
None/None	-1			-1		1	1
None/Motivated Other	1	-1					
None/NM-Familiar Other		1	-1				
None/Stranger			1			-1	-1
Easy to Fabricate/None				1	-1		-1
Easy to Fabricate/Motivated Other							
Easy to Fabricate/NM-Familiar Other							
Easy to Fabricate/Stranger							1
Difficult to Fabricate/None					1	-1	
Difficult to Fabricate/Motivated Other							
Difficult to Fabricate/NM-Familiar Other							
Difficult to Fabricate/Stranger						1	
Significant at $p < .05$ using Bonferroni correction:				*		*	*

Table 4. Mean Alibi Belief as a Function of Evidence

	Person Evidence				
Physical Evidence	None	Motivated Other	Non-Motivated Familiar Other	Non-Motivated Stranger	Overall Mean
None	4.79 (1.88)	5.40 (2.20)	5.83 (2.29)	6.63 (2.06)	5.66 (2.20)
Easy-to-Fabricate	6.44 (2.18)	6.83 (2.28)	6.46 (2.39)	6.68 (2.43)	6.60 (2.31)
Difficult-to-Fabricate	6.97 (2.22)	7.19 (2.21)	7.41 (2.23)	7.11 (2.66)	7.17 (2.33)
Overall Mean	6.07 (2.28)	6.47 (2.35)	6.57 (2.38)	6.81 (2.39)	

Note. Standard deviations are given in parentheses. Scale range is from 0 to 10. Higher numbers indicate greater belief in the alibi.

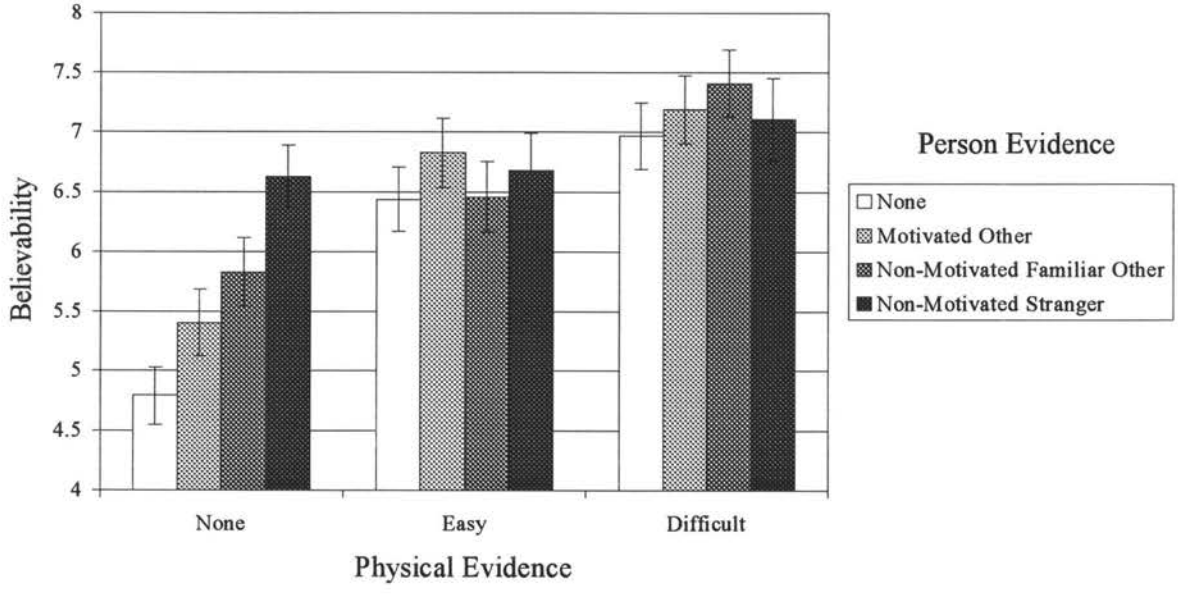

Figure 2. Mean believability rating as a function of corroborating evidence. Bars represent one standard error.

Figure 2 shows the overall pattern of means for the believe question according to condition. A general 4 x 3 mixed ANOVA revealed a significant interaction between physical evidence and person evidence on how believable evaluators rated alibis, Wilk's $\Lambda = .95$, $F(6, 492) = 2.28$, $MSE = 4.46$, $p < .05$. There was also a significant main effect for person evidence, $F(3, 247) = 2.76$, $MSE = 5.38$, $p < .05$, as well as a significant main effect for physical evidence, Wilk's $\Lambda = .805$, $F(2,246) = 29.82$, $MSE = 5.45$, $p < .05$.

Fourteen planned comparisons were then performed to clarify the relationships among person and physical evidence. The first three simple main effects were tests of whether person evidence affected believability within each level of physical evidence. Results indicated that type of person evidence only affected believability when there was no physical evidence. There was a significant simple main effect for person evidence at the level of no physical evidence $F(3, 248) = 8.48$, $MSE = 4.46$, $p < .05$ (see Table 2, Comparison 1). There was no significant simple main effect of person evidence at the level of easy-to-fabricate evidence $F(3, 247) = .39$, $MSE = 5.38$, $p = .76$ (Table 2, Comparison 2), or at the level of difficult-to-fabricate physical evidence $F(3, 247) = .39$, $MSE = 5.45$, $p = .76$ (Table 2, Comparison 3).

The next four simple main effects were tests of whether physical evidence affected believability within each level of person evidence. Results indicated that physical evidence affected believability at all levels of person evidence except the non-motivated stranger level. When the alibis included no person evidence, physical evidence made a significant difference in the ratings of alibis, with no physical evidence the weakest and difficult-to-fabricate evidence the strongest, Wilk's $\Lambda = .62$, $F(2, 61) = 18.84$, $p < .05$ (Table 2, Comparison 4). Likewise, there was a simple main effect of physical evidence at the level of motivated familiar-other person

evidence, Wilk's $\Lambda = .76$, $F(2, 61) = 9.85$, $p < .05$ (Table 2, Comparison 5), as well as at the level of non-motivated familiar-other person evidence, Wilk's $\Lambda = .80$, $F(2, 61) = 7.52$, $p < .05$ (Table 2, Comparison 6). However, there was no significant simple main effect for physical evidence when a stranger was a corroborator, Wilk's $\Lambda = .96$, $F(2, 60) = 1.18$, $p = .31$ (Table 2, Comparison 7).

The next three comparisons were pairwise comparisons at the level of no physical evidence. These were conducted to more closely examine the differences among types of person evidence in the absence of physical evidence. Motivated familiar others were not significantly more believable than no person evidence, $t(251) = 1.59$, $p = .66$, $d = 0.30$, 95% C.I.: -1.91, 0.71 (see Table 3, Comparison 1). Likewise, non-motivated familiar others were not significantly different from motivated others, $t(251) = 1.16$, $p = 1$, $d = 0.20$, 95% C.I.: -0.87, 1.75 (Table 3, Comparison 2). Strangers were not significantly more believable than non-motivated familiar others, $t(251) = 2.13$, $p = .21$, $d = .37$, 95% C.I.: -0.51, 2.11 (Table 3, Comparison 3).

Two more pairwise comparisons, these at the level of no person evidence, allowed a closer examination of the differences among types of physical evidence in the absence of person evidence. Easily fabricated physical evidence was rated significantly more believable than no physical evidence, $t(251) = 5.06$, $p < .05$, $d = 0.80$, 95% C.I.: 0.66, 2.64 (Table 3, Comparison 4). However, difficult-to-fabricate physical evidence was not significantly more believable than easy-to-fabricate physical evidence $t(251) = 1.46$, $p = .15$, $d = 0.24$, 95% C.I.: -0.58, 1.62 (Table 3, Comparison 5).

Although the pattern of simple effects suggests that person evidence is moderating the effect of physical evidence, the best test for such a relationship is contained in the two interaction

contrasts. First, an interaction test was performed to discover if the effect of no person evidence versus stranger corroboration was significantly greater at the level of no physical evidence compared with difficult-to-fabricate physical evidence. The difference between difficult-to-fabricate evidence and no physical evidence was greater at the level of no person evidence than at the level of non-motivated stranger evidence $t(228) = -3.02$, $p < .05$, (Table 3, Comparison 6). A second interaction test was performed to discover if the effect of no person evidence versus stranger corroboration was significantly greater at the level of no physical evidence compared with easy-to-fabricate evidence. The difference between easy-to-fabricate evidence and no physical evidence was greater at the level of no person evidence than at the level of non-motivated stranger $t(237) = -2.97$, $p < .05$, (Table 3, Comparison 7).

The Likelihood Measure

The probability (or likelihood) that the alibi provider was the gunman was rated on an 11-point Likert-type scale (0 = totally unlikely, 10 = he is certainly the gunman) in response to the question "How likely is it that this suspect is the gunman?" Table 5 shows means and standard deviations for the likely question according to condition. Figure 3 shows the overall pattern of means for the likely question according to condition. A general 4 x 3 mixed ANOVA revealed no significant interaction between physical evidence and person evidence on judgments of likelihood that the alibi provider was the gunman, Wilk's $\Lambda = .98$, $F(6, 484) = 0.99$, $p = .43$. However, there was a significant main effect for physical evidence Wilk's $\Lambda = .74$, $F(2, 242) = 42.99$, $p < .05$, as well as a significant main effect for person evidence $F(3, 243) = 4.29$, $MSE = 25.57$, $p < .05$.

Table 5. Mean Likelihood Rating as a Function of Evidence

	Person Evidence				
Physical Evidence	None	Motivated Other	Non-Motivated Familiar Other	Non-Motivated Stranger	Overall Mean
None	5.41 (1.77)	4.59 (2.04)	4.49 (2.19)	3.98 (2.16)	4.62 (2.10)
Easy-to-Fabricate	3.98 (2.37)	3.32 (2.35)	3.60 (2.41)	3.37 (2.23)	3.56 (2.34)
Difficult-to-Fabricate	3.35 (2.20)	3.22 (1.98)	2.66 (2.10)	2.81 (2.05)	3.01 (2.09)
Overall Mean	4.25 (2.29)	3.71 (2.21)	3.59 (2.35)	3.38 (2.19)	

Note. Standard deviations are given in parentheses. Scale range is from 0 to 10. Higher numbers indicate greater likelihood that alibi provider is the gunman.

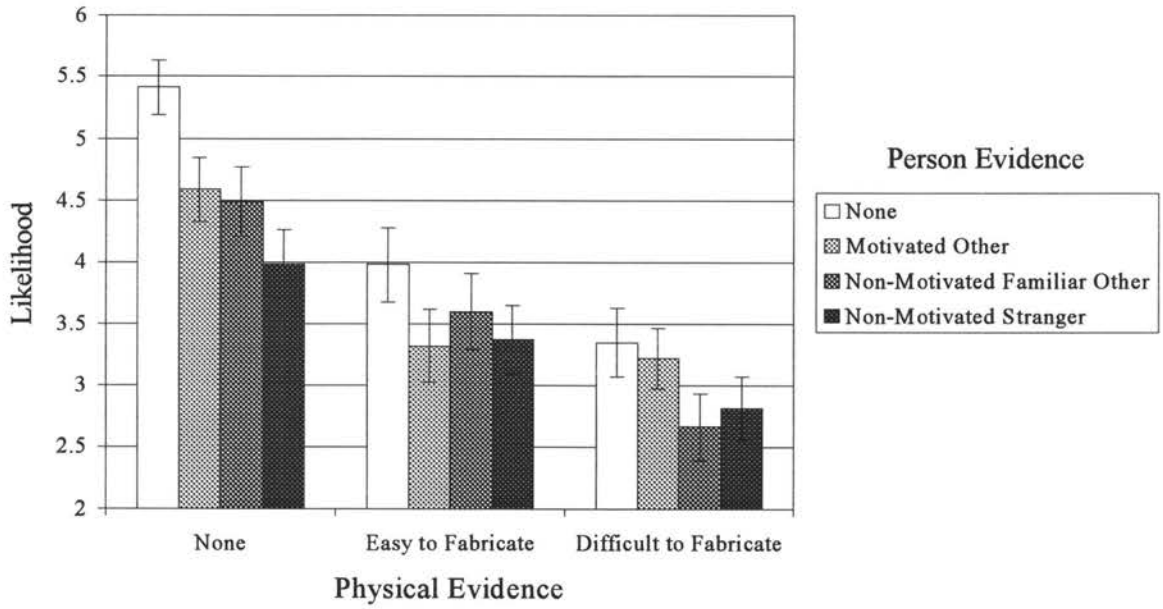

Figure 3. Mean likelihood rating as a function of corroborating evidence. Note: Bars represent one standard error.

The Relevant Traits Measure

Each alibi provider was rated on a set of ten traits relevant to the concept of honesty. Traits were rated on a 7-point Likert-type scale (1 = does not describe this suspect at all, 7 = describes this suspect perfectly). Six of the ten relevant traits were evaluatively negative traits (i.e., suspicious, cunning, scheming, deceitful, calculating, conniving), and four traits were evaluatively positive (i.e., honest, sincere, open, trustworthy). The four positive traits were reverse scored so that all traits bore a negative connotation, and the ten relevant traits were collapsed for each participant into a single, overall relevant traits rating.

Table 6 shows means and standard deviations for the overall relevant traits rating according to condition. Figure 4 shows the overall pattern of means of the relevant traits rating according to condition. A general 4 x 3 mixed ANOVA revealed no significant interaction between physical evidence and person evidence on relevant trait ratings of alibi providers, Wilk's $\Lambda = .97$, $F(6, 492) = 1.07$, $p = .38$. However, there was a significant main effect for physical evidence, Wilk's $\Lambda = .84$, $F(2, 246) = 23.61$, $p < .05$, as well as a significant main effect for person evidence, $F(3, 247) = 2.93$, $MSE = 1.08$, $p < .05$.

The Irrelevant Traits Measure

Each alibi provider was also rated on a set of ten traits that were expected to be irrelevant to alibi corroboration. Traits were rated on a 7-point Likert-type scale (1 = does not describe this suspect at all, 7 = describes this suspect perfectly). Two of the ten irrelevant traits were evaluatively negative traits (i.e., shy and shrewd), and eight traits were evaluatively positive (i.e., intelligent, caring, curious, funny, friendly, loyal, ambitious, content).

Table 6. Mean Relevant Trait Rating as a Function of Evidence

	Person Evidence				
Physical Evidence	None	Motivated Other	Non-Motivated Familiar Other	Non-Motivated Stranger	Overall Mean
No Physical	4.06 (0.81)	3.81 (0.88)	3.82 (0.83)	3.55 (0.81)	3.81 (0.85)
Easy-to-Fabricate	3.61 (0.98)	3.31 (1.00)	3.58 (0.96)	3.43 (0.84)	3.48 (0.95)
Difficult-to-Fabricate	3.47 (0.96)	3.21 (0.97)	3.29 (0.82)	3.32 (0.88)	3.32 (0.91)
Overall Mean	3.72 (0.95)	3.44 (0.99)	3.56 (0.89)	3.44 (0.84)	

Note. Standard deviations are given in parentheses. Scale range is from 1 to 7. Higher numbers indicate greater ratings of the alibi provider as dishonest, suspicious, insincere, deceitful, etc.

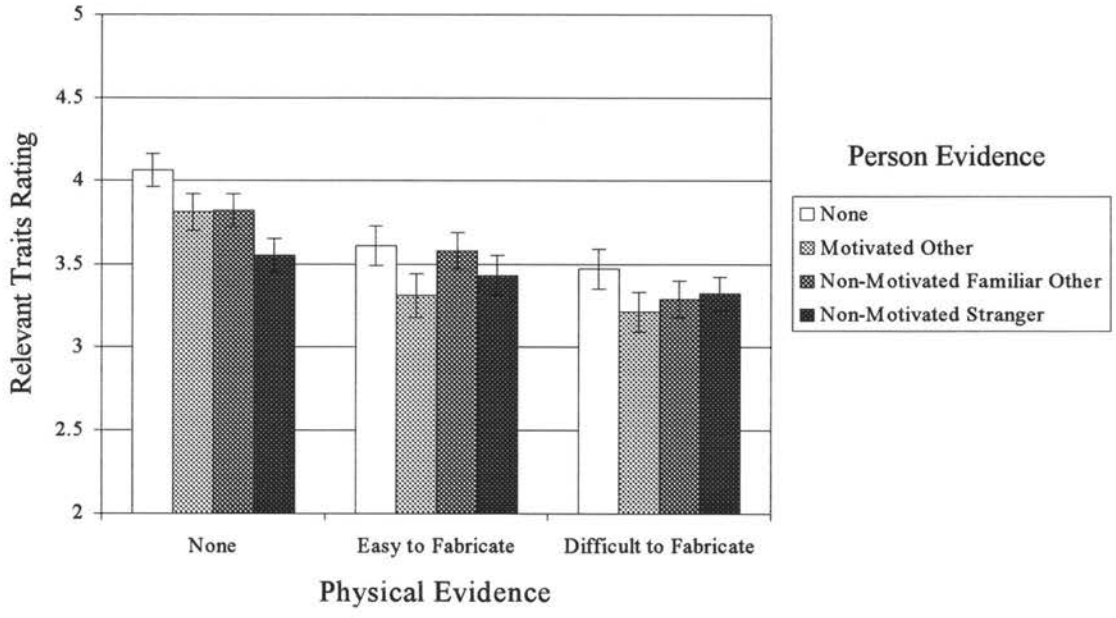

Figure 4. Mean relevant trait rating as a function of corroborating evidence. Bars represent one standard error.

Table 7. Mean Irrelevant Trait Rating as a Function of Evidence

	Person Evidence				
Physical Evidence	None	Motivated Other	Non-Motivated Familiar Other	Non-Motivated Stranger	Overall Mean
None	4.43 (0.54)	4.31 (0.66)	4.26 (0.65)	4.21 (0.64)	4.30 (0.63)
Easy-to-Fabricate	4.18 (0.62)	3.89 (0.63)	4.14 (0.63)	4.02 (0.64)	4.05 (0.64)
Difficult-to-Fabricate	4.22 (0.65)	3.95 (0.67)	4.12 (0.59)	4.07 (0.64)	4.09 (0.64)
Overall Mean	4.27 (0.61)	4.05 (0.68)	4.07 (0.71)	4.14 (0.66)	

Note. Standard deviations are given in parentheses. Scale range is from 1 to 7. Higher numbers indicate greater ratings of the alibi provider as unfriendly, disloyal, unfunny, unintelligent, etc.

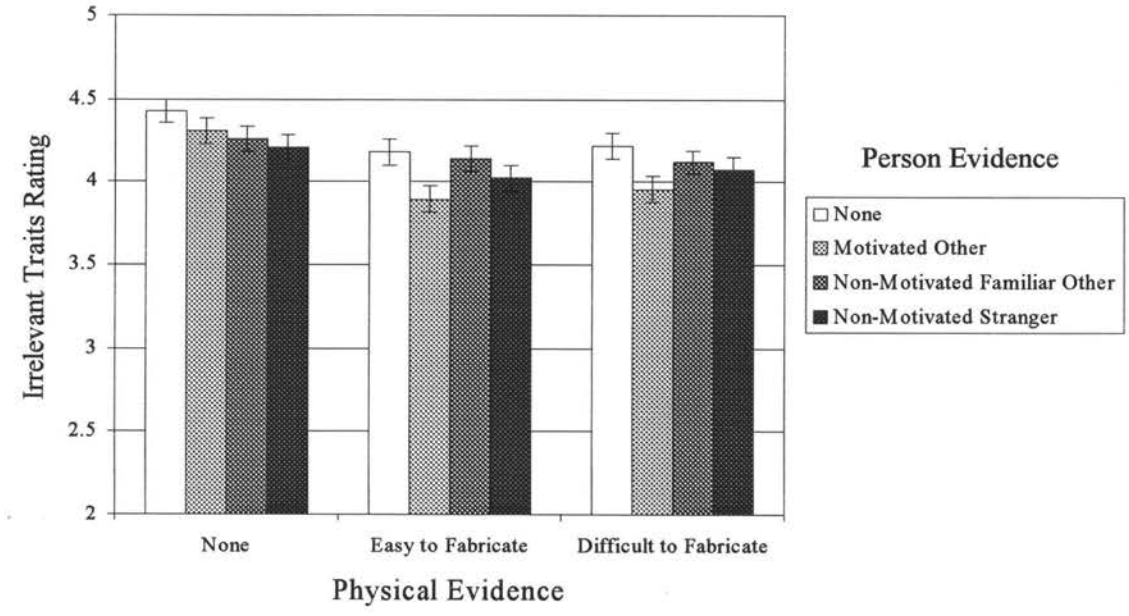

Figure 5. Mean irrelevant trait rating as a function of corroborating evidence. Bars represent one standard error.

The eight positive traits were reverse scored so that all traits bore a negative connotation, and the ten irrelevant traits were collapsed for each participant into a single, overall irrelevant traits rating.

Table 7 shows means and standard deviations for the overall irrelevant traits rating according to condition. Figure 5 shows the overall pattern of means of the irrelevant traits rating according to condition. A general 4 x 3 mixed ANOVA revealed no significant interaction between physical evidence and person evidence on how participants rated alibi providers on the irrelevant traits, Wilk's $\Lambda = .97$, $F(6, 492) = 1.17$, $p = .32$. In addition, there was not a significant main effect for person evidence, $F(3, 246) = 2.29$, $MSE = 0.78$, $p = .07$. However, there was a significant main effect for physical evidence, Wilk's $\Lambda = .87$, $F(2, 245) = 17.72$, $p < .05$.

DISCUSSION

This research was designed to be an initial test of the strength of alibis using a believability taxonomy that combines person evidence and physical evidence as types of support for alibi claims. It was expected that participants would make distinctions among the four levels of person evidence and among the three levels of physical evidence. The results supported this general expectation, as indicated by significant main effects for both types of evidence on the believability measure. It was also expected that person evidence and physical evidence would interact. Specifically, it was expected that levels of person evidence would have an effect on believability in the absence of physical evidence but the effect of person evidence would be greatly diminished or eliminated under conditions of strong physical evidence. The results generally supported this expectation as well, as evidenced by the interaction between physical evidence and person evidence. In addition, simple main effects analyses showed that person evidence had an effect on believability of the alibis when there was no physical evidence, but there was no effect of person evidence for the strongest (difficult-to-fabricate) level of physical evidence. Similarly, the data indicated that physical evidence had a strong effect at three of the four levels of person evidence, but did not have an effect at the strongest level of person evidence (non-motivated stranger). Hence, the overall pattern is consistent with the predictions and indicates high promise for the proposed taxonomy.

Although person evidence is important in the absence of any physical supporting evidence, it is surprising that even the easy-to-fabricate physical evidence was sufficient to moderate the effect of person evidence. There is clearly some arbitrariness in how a researcher operationalizes forms of alibi-supporting evidence, but the easy-to-fabricate physical evidence

seems intuitively to have been operationalized as a relatively low level of alibi support: a cash receipt that, although dated and timed, could have been obtained or manufactured in any number of ways. Perhaps evaluators did not perceive the cash receipt in this study as easily-fabricated physical evidence because they did not fully consider how easy it might be to obtain or manufacture such a receipt. What is important is *perceived* ease of fabrication, not necessarily the actual ease of fabrication. Research shows that having people form hypothetical explanations for an event increases their perceived likelihood that the event has happened or will happen (Anderson, Lepper, & Ross, 1980; Ross, Lepper, Strack, & Steinmetz, 1977). Had the evaluators been encouraged to generate, prior to seeing any alibis, an explanation of how a receipt could be fabricated, the cash receipt may have been rated as less believable. Formulation of a hypothetical explanation of evidence fabrication should encourage evaluators to rate the possibility of fabrication as more likely.

That such modest physical evidence could render irrelevant the presence or absence of a corroborating person seems counterintuitive, yet the person evidence variable had no effect when the easy-to-fabricate physical evidence was present. This seems to indicate either that person evidence is not very important or that even relatively weak physical evidence is quite important, or both. The effect of person evidence in the no-physical-evidence condition in the current study as well as the results of Experiment 2 in Lindsay et al. (1986) cast into doubt the idea that person evidence is not very important. That weak physical evidence is quite important might be what is driving the moderation of person evidence by easy-to-fabricate physical evidence. Perhaps evaluators do not believe that they themselves could produce any kind of physical evidence, and they apply beliefs about their own abilities to produce alibi evidence to alibi providers in general,

so they are impressed by even weak physical evidence—a kind of false-consensus effect (Marks & Miller, 1987).

As expected, participants did not appear to appreciate that, among people with no motive to lie, a stranger might be a less reliable alibi corroborator than a familiar other person. The stranger might have made a mistaken identification of the alibi provider, whereas this is not likely for someone who knew the alibi provider. Participants were, if anything, more likely to believe the alibi provider if a stranger corroborated the alibi than if a familiar other person corroborated the alibi. This seems to agree with some research in eyewitness identification showing that people do not normally think that the identification of strangers is a problem (Loftus, 1974). Why might the stranger be a more credible corroborator than a non-motivated familiar other? It was suggested in the introduction to this thesis that people might naturally approach alibis from the perspective that the alibi provider is lying. Perhaps evaluators are primarily looking for evidence of lying, rather than entertaining ideas about honest mistakes, which might lead them to be suspicious of the non-motivated familiar other. Although there was nothing to lead participants to think that the non-motivated familiar other had any motive to lie for the alibi provider (unlike the motivated-other conditions where the alibi corroborator was a friend, mother, or brother), perhaps the prior familiarity between the alibi provider and corroborator was sufficient to raise suspicion regarding motives.

The open-ended questions to which participants gave their reasons for believing and disbelieving the alibis were intended for future research ideas and were never meant to be subjected to formal analysis. Nevertheless, I sampled from the open-ended responses to see if any surprising answers surfaced or if participants offered comments that might clarify my

speculations. Generally, participants' explanations for their judgments were consistent with the idea put forth earlier in this thesis that evaluators meet alibis with skepticism and disbelief. Participants' answers for why they disbelieved an alibi were generally longer and more involved than their explanations for why they believed an alibi.

Participants seemed to want to stretch the time of the alibi around the time of the crime to fit why the suspect might have been the gunman rather than stretching the time to fit a plausible explanation for why the suspect might not have been the gunman. For instance, one participant wrote why he or she disbelieved the alibi, "The only thing is the crime was approximately 8:00. If the crime was committed at 7:50 and he took a cab…[he could have done it]." No participant attempted to explain, for instance, that for a crime at approximately 8:00 P.M., an alibi provider who claimed to have been in a store between 7:30 and 8:00 might have been there even longer than he thought, and thus he could not possibly have committed the crime.

Many participants used the behaviors offered as part of the alibi to make inferences about the character of the suspect and to explain how that information makes the suspect a more or less likely criminal. For example, one participant explained why he or she disbelieved the alibi: "Since he couldn't remember what he did—sounds like he drinks a lot, and the gunman stole alcohol!" Another participant explained why he or she believed the suspect was not the gunman because the suspect claimed to have been in a bookstore: "A guy that liked to read probably wouldn't rob a convenience store for money and alcohol." Recall from the introduction to this thesis that alibis are given to convince evaluators that the alibi provider was not at the scene of the crime; alibis must speak to both the time of the crime and the space the alibi provider was occupying at that time. Participants, as "detectives," were trying to solve the time/space problem

by identifying which suspect was likely to have been at the scene of the crime at the right time. Accepting elements of an alibi to infer character information creates a logical problem that leads to peculiar (perhaps even irrational) judgments. For instance, if a suspect claimed to have been in a bookstore, and an evaluator believed this alibi, the idea that the suspect is someone who liked to read is irrelevant—the suspect was clearly somewhere else. However, if the evaluator does not accept that the suspect was in the bookstore, why would the evaluator even bother to think that the suspect was someone who liked to read? Occasionally it seemed as if participants were writing their own crime novels while explaining the rationale behind their decisions.

Another observation that surfaced in the open-ended responses was that participants interpreted the same alibis in strikingly different ways. For instance, one alibi report stated that the suspect initially could not remember where he was and only later in the interview he claimed he had been out for a walk in his neighborhood. Some participants found this alibi very believable, while others severely criticized the alibi. One participant found the lack of an immediate alibi a logical response and judged the alibi more believable: "[I believed him because of] the fact that he actually didn't remember at first because often, if it's just a random time and day, you don't remember until you think about it." Another participant wrote, "Under pressure people don't think straight, when they can't come up with an answer they appear guilty when a lot of the time they aren't." For other participants, the admittance that he could not initially remember his whereabouts was particularly suspicious: "He didn't know where he was—makes it sound like he couldn't think of a lie to tell the cops in time." Perhaps there is a measurable individual difference variable that might sort between people who tend to believe an alibi and people who tend to disbelieve an alibi.

This informal examination of the open-ended responses provides some idea of the types of information people use to evaluate alibis. Especially interesting is that participants tend to use information from the alibi that does not directly speak to the degree of proof of the alibi, such as the types of behaviors offered as the alibi or the types of places the alibi provider claimed to have been. For example, an alibi provider who claims to have been in church might be seen as somehow different from an alibi provider who claims to have been in a bar. These two alibi providers might have virtually the same story, the same level of corroboration (and would fall into the same cell of the taxonomy), yet it seems that their stories would nonetheless be evaluated differently. Future research into the role of extraneous information in the evaluation of alibis could prove fruitful.

Although the primary construct underlying the alibi taxonomy was believability and believability was the primary interest of this work, likelihood-of-guilt judgments were also measured. In general, the likelihood-of-guilt judgments followed the same pattern as the believability judgments. That is not surprising given that there was no other evidence in the materials and participants had to rely on the alibis themselves to make judgments about the likelihood of guilt. Still, it is important to keep likelihood of guilt and believability of the alibi conceptually separate. It is entirely possible to not believe an alibi and yet hold a belief that the alibi provider did not commit the offense. This could happen, for instance, if the alibi evaluator thinks that the alibi provider is lying about the alibi to cover up for something else (e.g., an affair) but is not actually the person who committed the offense.

This research also measured trait inferences about the alibi providers. As expected, traits that are related somehow to the dimension of honesty (e.g., suspicious) followed a pattern across

conditions that paralleled results on the believability measure. Unexpectedly, however, even unrelated traits (e.g., curious) followed this same pattern. Why would inferences about unrelated traits, such as shy or intelligent, be affected by the strength of the corroborating evidence for an alibi? It appears that this is possibly a halo effect, in which the global evaluation of the suspect alters the interpretation of other attributes (Nisbett & Wilson, 1977). Although it might seem that the presence versus absence of a receipt should have no implications for inferences about these unrelated traits, the strong effect of such variables on the believability of the alibi and associated suspicions that the person was a criminal perhaps color the overall evaluation of the person along a good/bad dimension. This is a useful observation because it suggests that there are may be other ways to measure the goodness of alibis without even asking people to evaluate the alibi itself (implicit measures).

Although the results of this work suggest that physical evidence readily trumps person evidence, caution is needed in generalizing this observation. There are many ways to operationalize the variables represented in the taxonomy. In actual cases, in the ultimate evaluation phase, the person who provides corroboration for a defendant's alibi appears in person and might give very vivid accounts of the time, nature of interaction, and other details that could make the person corroboration very powerful whereas a receipt is still just a piece of paper. In addition, at trial the attorneys begin to play a role. Prosecutors, for instance, might use opening and closing arguments or testimony from experts to help jurors understand how easy it is to fabricate a receipt. Pennington and Hastie (1990) argue that jurors first construct a summary structure, or trial story, regarding what they believe are true facts of the case, and they add information into this summary structure as it is revealed. The manner in which alibi evidence is

presented at trial, as well as how well the alibi story fits in with the trial story the jurors are constructing, could have a very powerful effect on final judgments. For these reasons, caution is required in assuming that this precise pattern of results will obtain for all possible operationalizations of the taxonomy. Nevertheless, the general observations obtained in this research, such as the fact that alibi evaluators distinguish between levels of person and physical evidence and that person and physical evidence interact, are probably generalizable.

The purpose of this research was to assess the reasonableness of the proposed alibi taxonomy. Overall, the results are very encouraging and they do not seem to indicate a need to make major modifications to the taxonomy. In fact, it would be premature and perhaps unwise to collapse over levels of the taxonomy that failed to show statistically significant differences (e.g., the stranger vs. the non-motivated familiar other distinction). Greater levels of statistical power might have shown these differences to be reliable.

Although this thesis provides some information on the relative believability of alibis, there is no information here about how beliefs in and about alibis are formed more generally. Are beliefs about alibis formed, as Descartes (1644/1985) suggests (and was discussed earlier in this thesis), only after an effortful consideration of the alibi? Or are alibis believed as true the instant they are comprehended, as Spinoza (1677/2000) would argue? Do evaluators approach alibis from a starting point in which the "alibi provider is lying," or from a starting point in which the "alibi provider is telling the truth?" Or is there a third possibility, one in which the evaluator first comprehends the accusation as a story of the crime and places the alibi provider as the actor in that story. Then as the alibi provider denies committing the crime, the evaluator must unaccept their initial comprehension of the accusation (and must then put someone else as the actor in the

crime story). Future research that places evaluators under cognitive load or forces premature output (see Gilbert et al., 1993) could answer questions about how evaluators approach alibis. Even the strongest alibis in this research, with difficult-to-fabricate physical evidence and a stranger corroborator, received a mean believability rating of 7.1 out of a maximum of 10. What kind of alibi might it take to get a 10?

The results of this research are encouraging enough to suggest that the taxonomy might now be used to "score" alibis by placing them in categories represented by the taxonomy. For instance, one might take real criminal cases and count the frequencies with which actual alibis fall into the taxonomy. Do most alibis have person corroboration or do most alibis have physical corroboration? How often do they have both and how often do they have neither? Perhaps the majority of real-world alibis have virtually nothing. Among person alibis, are they usually motivated familiar others? Are stranger alibis rare? If people were approached and required to establish alibis for a particular place and time, how well could they do this in terms of the taxonomy? Are most innocent people stuck with relatively weak alibis?

REFERENCES

American Psychological Association. (1992). Ethical principles of psychologists and code of conduct. American Psychologist, 47, 1597-1611.

Anderson, C. A., Lepper, M. R., & Ross, L. (1980). Perseverance of social theories: The role of explanation in the persistence of discredited information. Journal of Personality and Social Psychology, 39, 1037-1049.

Bennett, J. (2001). Learning from six philosophers: Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume (Vol. 1). Oxford, England: Clarendon Press.

Black, H. C., Nolan, J. R., & Nolan-Haley, J. M. (1990). Black's law dictionary: Definitions of the terms and phrases of American and English jurisprudence, ancient and modern (6th ed.). St. Paul: West.

Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. Journal of Verbal Learning and Verbal Behavior, 11, 671-684.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. (2nd ed.). Hillsdale, NJ: Earlbaum.

Descartes, R. (1985). Principles of philosophy. In J. Cottingham, R. Stoothoff, & D. Murdoch (Eds. and Trans.), The philosophical writings of Descartes (Vol. 1, pp. 193-267). Cambridge, England: Cambridge University Press. (Original work published 1644)

Gilbert, D. T. (1991). How mental systems believe. American Psychologist, 46, 107-119.

Gilbert, D. T. (1993). The assent of man: Mental representation and the control of belief. In D. M. Wegner & J. M. Pennebaker (Eds.), Handbook of Mental Control (pp. 57-87). Englewood Cliffs, NJ: Prentice Hall.

Gilbert, D. T., Krull, D. S., & Malone, P. S. (1990). Unbelieving the unbelievable: Some problems in the rejection of false information. Journal of Personality and Social Psychology, 59, 601-613.

Gilbert, D. T., Tafarodi, R. W., & Malone, P. S. (1993). You can't not believe everything you read. Journal of Personality and Social Psychology, 65, 221-233.

Gooderson, R. N. (1977). Alibi. London: Hewemann Educational.

Heider, F. (1958). The psychology of interpersonal relations. New York: Wiley.

Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). Communication and Persuasion: Psychological Studies of Opinion Change. New Haven: Yale University Press.

Johnson, M. K., Hashtroudi, S., & Lindsay, D. S. (1993). Source monitoring. Psychological Bulletin, 114, 3-28.

Kelley, H. H. (1973). The processes of causal attribution. American Psychologist, 28, 107-128.

Lindsay, R. C. L., Lim, R., Marando, L., & Cully, D. (1986). Mock-juror evaluations of eyewitness testimony: A test of metamemory hypotheses. Journal of Applied Social Psychology, 16, 447-459.

Lindsay, R. C. L., Wells, G. L., & Rumpel, C. (1981). Can people detect eyewitness identification accuracy within and between situations? Journal of Applied Psychology, 66, 79-89.

Loftus, E. F. (1974, August). Reconstructing memory: The incredible eyewitness. Psychology Today, 116-119.

Marks, G., & Miller, N. (1987). Ten years of research on the false-consensus effect: An empirical and theoretical review. Psychological Bulletin, 102, 72-90.

McCloskey, M., Wible, C. G., & Cohen, N. J. (1988). Is there a special flashbulb-memory mechanism? Journal of Experimental Psychology: General, 117, 171-181.

Merriam-Webster's collegiate dictionary (10th ed.). Springfield, MA: Merriam-Webster.

Nisbett, R. E., & Wilson, T. D. (1977). The halo effect: Evidence for unconscious alteration of judgments. Journal of Personality and Social Psychology, 35, 250-256.

Pennington, N., & Hastie, R. (1990). Practical implications of psychological research on juror and jury decision making. Personality and Social Psychology Bulletin, 16, 90-105.

Reid, J. E., & Associates, Inc. (2000, April). Eliciting and evaluating an alibi. Retrieved November 13, 2001, from http://www.reid.com/Investigatortips.html?serial=17

Ross, L., Lepper, M. R., Strack, F., & Steinmetz, J. (1977). Social explanation and social expectation: Effects of real and hypothetical explanations on subjective likelihood. Journal of Personality and Social Psychology, 35, 817-829.

Schacter, D. L. (1999). The seven sins of memory: Insights from psychology and cognitive neuroscience. American Psychologist, 54, 182-203.

Spinoza, B. (2000). Ethics (G. H. R. Parkinson, Ed. and Trans.). New York: Oxford University Press. (Original work published 1677)

Technical Working Group for Eyewitness Evidence. (1999). Eyewitness evidence: A guide for law enforcement. Washington, D.C: United States Department of Justice, Office of Justice Programs.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. Science, 185, 1124-1131.

Wegner, D. M., Wenzlaff, R., Kerker, R. M., & Beattie, A. E. (1981). Incrimination through innuendo: Can media questions become public answers? Journal of Personality and Social Psychology, 40, 822-832.

Wells, G. L. (1984). How adequate is human intuition for judging eyewitness testimony? In G. L. Wells & E. F. Loftus (Eds.), Eyewitness testimony: Psychological perspectives. New York: Cambridge University Press.

Wells, G. L. (1993). What do we know about eyewitness identification? American Psychologist, 48, 553-571.

Wells, G. L., Malpass, R. S., Lindsay, R. C. L., Fisher, R. P., Turtle, J. W., & Fulero, S. M. (2000). From the lab to the police station: A successful application of eyewitness research. American Psychologist, 55, 581-598.

Wells, G. L., & Ronis, D. L. (1982). Discounting and augmentation: Is there something special about the number of causes? Personality and Social Psychology Bulletin, 8, 566-572.

Wells, G. L., Small, M., Penrod, S., Malpass, R. S., Fulero, S. M., & Brimacombe, C. A. E. (1998). Eyewitness identification procedures: Recommendations for lineups and photospreads. Law and Human Behavior, 22, 603-647.

Wells, G. L., & Windschitl, P. D. (1999). Stimulus sampling in social psychological experimentation. Personality and Social Psychology Bulletin, 25, 1115-1125.

Will, A. P. (1896). A treatise on the law of circumstantial evidence, illustrated by numerous cases. Philadelphia: T. & J. W. Johnson & Co.

Yandell, B. (1979). Those who protest too much are seen as guilty. Personality and Social Psychology Bulletin, 5, 44-47.

APPENDIX A

Taxonomy of Alibi Believability

		Person Evidence			
		None	Motivated Other	Non-Motivated Familiar Other	Non-Motivated Stranger
Physical Evidence	None	1	2	3	3
	Easy to Fabricate	2.5	3	3.5	3.5
	Difficult to Fabricate	4	4	4	4

Note. Numbers indicate relative strength of alibis.

APPENDIX B

GENERAL INCIDENT REPORT

INCIDENT NO.	REPORTING OFFICER/BADGE	TIME/DATE REPORTED	TIME OF INCIDENT	DATE OF INCIDENT
M-9768-1-NED	Smith #92	8:45 pm [redacted]	8:00 pm	[redacted]

INCIDENT TYPE	INCIDENT ADDRESS
Armed Robbery, Assault	[redacted]

At approximately 8:00 pm a man in a black coat entered the convenience store (approximately 15 minutes from the city's south edge) and began pacing the aisles. The teenage clerk, [redacted], was busy with several other customers and didn't notice him until after the customers left the store. As ~~the clerk turned to help him, the man pulled a pistol from his coat pocket~~ and demanded that she empty the cash register into a grocery sack. [redacted] did as she was told and fumbled with the cash register while the gunman waved the gun and shouted. When the full-service bell rang he roughly grabbed the sack, shoved [redacted] against the counter, and ran for the side door. ~~When he discovered it was jammed, he smashed his way through it and ran off.~~

I arrived shortly after the clerk called in and took her statement and description of the gunman (see attached memo). [redacted] does not remember the gun type or description of the weapon. There were no other witnesses and no security tape. Suspect made off with about $250 cash and several bottles ~~of liquor, estimated value $55. Where the suspect had broken the door I found~~ several drops of blood, which were collected for possible DNA evidence.

SUPPLEMENTAL REPORT

INCIDENT NO.	REPORTING OFFICER/BADGE	DATE
M-9768-1-NED	Jones #141	[redacted]

This case is now several months old and any advantage we may have had with finding fresh scars on the hands or arms of possible suspects is gone. The case now has six suspects, all of whom fit the witness's description, and all own black coats similar to the one [redacted] described. Witness was ~~shown a live lineup containing the six suspects, and was unable to determine~~ which was the gunman. Witness was no help. Alibi investigation in progress.

It is your job to help these police investigators figure out who is the gunman. On the next several pages you will read the alibi given by each of the six suspects, then you will be asked questions about the alibis you have read. In multiple-suspect cases such as this one, detectives must make a judgment call as to which suspect is the most likely perpetrator. In this case, the detectives did not have the time or resources to fully investigate all six suspects; indeed, it would be a serious error to focus an intense investigation on someone who was not likely to have committed the crime. So, this phase is critical to the investigators' success.

Remember, we are interested in your reasoning process, so please think carefully about your answers.

SUPPLEMENTAL REPORT

INCIDENT NO.	REPORTING OFFICER/BADGE	DATE
M-9768-1-NED	Jones #141	[redacted]

Suspect A. M. claimed he was at his friend's house all night on the evening in question. He said that he was there from about 4:30 in the afternoon until approximately 9:00 pm. A statement from the friend was taken. The friend believed that the evening in question was the evening A. M. was there. The friend lives in the central city area. Suspect does not own a gun.

How much do you believe this suspect's alibi?

0 1 2 3 4 5 6 7 8 9 10

Not at all *Completely*

Please rate this suspect:

1 = does not describe this suspect at all *7 = describes this suspect perfectly*

Intelligent	1	2	3	4	5	6	7
Conniving	1	2	3	4	5	6	7
Curious	1	2	3	4	5	6	7
Honest	1	2	3	4	5	6	7
Funny	1	2	3	4	5	6	7
Deceitful	1	2	3	4	5	6	7
Open	1	2	3	4	5	6	7
Loyal	1	2	3	4	5	6	7
Scheming	1	2	3	4	5	6	7
Content	1	2	3	4	5	6	7
Shy	1	2	3	4	5	6	7
Suspicious	1	2	3	4	5	6	7
Sincere	1	2	3	4	5	6	7
Cunning	1	2	3	4	5	6	7
Ambitious	1	2	3	4	5	6	7
Friendly	1	2	3	4	5	6	7
Calculating	1	2	3	4	5	6	7
Caring	1	2	3	4	5	6	7
Shrewd	1	2	3	4	5	6	7
Trustworthy	1	2	3	4	5	6	7

How likely is it that this suspect is the gunman?

0 1 2 3 4 5 6 7 8 9 10

Totally unlikely *He is certainly the gunman*

SUPPLEMENTAL REPORT

INCIDENT NO.	REPORTING OFFICER/BADGE	DATE
M-9768-1-NED	Smith #92	[redacted]

Suspect B. L. said he was entertaining his brother in his home on the west side of the city on the evening in question. He said they had ordered pizza and provided a pizza delivery receipt, paid in cash, timed 8:07 pm. A statement from the brother was taken; the brother claimed they had been in the home for the entire time between 7:30 and 8:30 pm. Suspect does not own a gun.

How much do you believe this suspect's alibi?

0 1 2 3 4 5 6 7 8 9 10

Not at all *Completely*

Please rate this suspect:

1 = does not describe this suspect at all *7 = describes this suspect perfectly*

Intelligent	1	2	3	4	5	6	7
Conniving	1	2	3	4	5	6	7
Curious	1	2	3	4	5	6	7
Honest	1	2	3	4	5	6	7
Funny	1	2	3	4	5	6	7
Deceitful	1	2	3	4	5	6	7
Open	1	2	3	4	5	6	7
Loyal	1	2	3	4	5	6	7
Scheming	1	2	3	4	5	6	7
Content	1	2	3	4	5	6	7
Shy	1	2	3	4	5	6	7
Suspicious	1	2	3	4	5	6	7
Sincere	1	2	3	4	5	6	7
Cunning	1	2	3	4	5	6	7
Ambitious	1	2	3	4	5	6	7
Friendly	1	2	3	4	5	6	7
Calculating	1	2	3	4	5	6	7
Caring	1	2	3	4	5	6	7
Shrewd	1	2	3	4	5	6	7
Trustworthy	1	2	3	4	5	6	7

How likely is it that this suspect is the gunman?

0	1	2	3	4	5	6	7	8	9	10

Totally unlikely *He is certainly the gunman*

SUPPLEMENTAL REPORT

INCIDENT NO.	REPORTING OFFICER/BADGE	DATE
M-9768-1-NED	Smith #92	[redacted]

Suspect C. Z. claimed that he was meeting his mother at the airport north of the city on the evening in question. The mother's plane arrived at 7:55 pm. The suspect said that he had met his mother at the gate, and accompanied her to the baggage claim. The mother was contacted and confirmed that the suspect met her at the gate and was with her the rest of the evening. Security camera video from the airport shows the suspect going through the metal detectors at 7:32 pm. Suspect does not own a gun.

How much do you believe this suspect's alibi?

0 1 2 3 4 5 6 7 8 9 10

Not at all *Completely*

Please rate this suspect:

1 = does not describe this suspect at all *7 = describes this suspect perfectly*

Intelligent	1	2	3	4	5	6	7
Conniving	1	2	3	4	5	6	7
Curious	1	2	3	4	5	6	7
Honest	1	2	3	4	5	6	7
Funny	1	2	3	4	5	6	7
Deceitful	1	2	3	4	5	6	7
Open	1	2	3	4	5	6	7
Loyal	1	2	3	4	5	6	7
Scheming	1	2	3	4	5	6	7
Content	1	2	3	4	5	6	7
Shy	1	2	3	4	5	6	7
Suspicious	1	2	3	4	5	6	7
Sincere	1	2	3	4	5	6	7
Cunning	1	2	3	4	5	6	7
Ambitious	1	2	3	4	5	6	7
Friendly	1	2	3	4	5	6	7
Calculating	1	2	3	4	5	6	7
Caring	1	2	3	4	5	6	7
Shrewd	1	2	3	4	5	6	7
Trustworthy	1	2	3	4	5	6	7

How likely is it that this suspect is the gunman?

0 1 2 3 4 5 6 7 8 9 10

Totally unlikely *He is certainly the gunman*

Now that you have evaluated the first three suspects and their alibis, we'd like you to take some time to answer some questions about your decisions. Please DO NOT turn back to the original police reports, we have repeated the alibis for you.

Suspect A. M. claimed he was at his friend's house all night on the evening in question. He said that he was there from about 4:30 in the afternoon until approximately 9:00 pm. A statement from the friend was taken. The friend believed that the evening in question was the evening A. M. was there. The friend lives in the central city area. Suspect does not own a gun.

What about the above alibi led you to believe it?

_____

_____

_____

What about the above alibi led you to disbelieve it?

_____

_____

_____

Suspect B. L. said he was entertaining his brother in his home on the west side of the city on the evening in question. He said they had ordered pizza and provided a pizza delivery receipt, paid in cash, timed 8:07 pm. A statement from the brother was taken; the brother claimed they had been in the home for the entire time between 7:30 and 8:30 pm. Suspect does not own a gun.

What about the above alibi led you to believe it?

_____

_____

_____

What about the above alibi led you to disbelieve it?

_____

_____

_____

Suspect C. Z. claimed that he was meeting his mother at the airport north of the city on the evening in question. The mother's plane arrived at 7:55 pm. The suspect said that he had met his mother at the gate, and accompanied her to the baggage claim. The mother was contacted and confirmed that the suspect met her at the gate and was with her the rest of the evening. Security camera video from the airport shows the suspect going through the metal detectors at 7:32 pm. Suspect does not own a gun.

What about the above alibi led you to believe it?

_____

_____

_____

What about the above alibi led you to disbelieve it?

_____

_____

_____

Before you move on to the next three alibis, please consider the first three as a group.

Of these three suspects, who do you believe is the most likely to have actually committed the crime? Who would you build a case against? (Please rank order these three, with 1 = MOST LIKELY, and 3 = LEAST LIKELY.)

Suspect A.M.	Suspect B.L.	Suspect C.Z.
_____	_____	_____

At this time please close your folder and wait for the information on the last three suspects.

APPENDIX C

NO PERSON EVIDENCE

NONE) A. M. Suspect A. M. initially could not remember where he was between 7:30 and 8:30 on the evening in question. Later in the interview he claimed that he had been out for a walk in his neighborhood on the east side of the city. A. M. has no record of gun ownership.

EASY) B. L. Suspect B. L. said that he was eating in a restaurant on the city's north side between 7:30 and 8:30 pm. He claimed to have arrived at approximately 7:30 pm, and provided a receipt which was timed 8:18 pm and was paid in cash. He said he ate alone. B. L. has no record of gun ownership.

DIFF) C. Z. Suspect C. Z. said he had been shopping at the mall on the north side between 7:30 and 8:30 pm on the evening in question. He believed around 8 pm he had been in the jewelry store looking at watches. He said he had been shopping alone, and did not buy anything. Security camera video from the store shows the suspect in the store between 8:06 and 8:22. C. Z. does not have any record of gun ownership.

NONE) B. L. Suspect B. L. said that he was eating in a restaurant on the city's north side between 7:30 and 8:30 pm. He claimed to have arrived at approximately 7:30 pm and stayed for about 45 minutes. He said he ate alone. B. L. has no record of gun ownership.

EASY) C. Z. Suspect C. Z. said he had been shopping at the mall on the north side between 7:30 and 8:30 pm on the evening in question. He believed around 8 pm he had been in the jewelry store looking at watches. He said he had been shopping alone, and produced a receipt which was timed 8:18 pm and was paid in cash. C. Z. does not have any record of gun ownership.

DIFF) A. M. Suspect A. M. initially could not remember where he was between 7:30 and 8:30 on the evening in question. Later in the interview he claimed that he had been out for a walk in his neighborhood on the east side of the city. Security video from an ATM on the route the suspect claimed to have taken showed the suspect walking by at 8:22 pm. A. M. has no record of gun ownership.

NONE) C. Z. Suspect C. Z. said he had been shopping at the mall on the north side between 7:30 and 8:30 pm on the evening in question. He believed around 8 pm he had been in the jewelry store looking at watches. He said he had been shopping alone, and did not buy anything. C. Z. does not have any record of gun ownership.

EASY) A. M. Suspect A. M. initially could not remember where he was between 7:30 and 8:30 on the evening in question. Later in the interview he claimed that he had been out for a walk in his neighborhood on the east side of the city. He said he stopped at a newspaper stand on his route and produced a cash receipt timed 8:18 pm. A. M. has no record of gun ownership.

DIFF) B. L. Suspect B. L. said that he was eating in a restaurant on the city's north side between 7:30 and 8:30 pm. He claimed to have arrived at approximately 7:30 pm and stayed for about 45 minutes. He said he ate alone. Security video from the restaurant's entrance showed the suspect entering the restaurant at 7:34 pm and leaving at 8:09 pm. B. L. has no record of gun ownership.

MOTIVATED FAMILIAR OTHER PERSON EVIDENCE

NONE) A. M. Suspect A. M. claimed he was at his friend's house all night on the evening in question. He said that he was there from about 4:30 in the afternoon until approximately 9:00 pm. A statement from the friend was taken. The friend believed that the evening in question was the evening A. M. was there. The friend lives in the central city area. Suspect does not own a gun.

EASY) B. L. Suspect B. L. said he was entertaining his brother in his home on the west side of the city on the evening in question. He said they had ordered pizza and provided a pizza delivery receipt, paid in cash, timed 8:07 pm. A statement from the brother was taken; the brother claimed they had been in the home for the entire time between 7:30 and 8:30 pm. Suspect does not own a gun.

DIFF) C. Z. Suspect C. Z. claimed that he was meeting his mother at the airport north of the city on the evening in question. The mother's plane arrived at 7:55 pm. The suspect said that he had met his mother at the gate, and accompanied her to the baggage claim. The mother was contacted and confirmed that the suspect met her at the gate and was with her the rest of the evening. Security camera video from the airport shows the suspect going through the metal detectors at 7:32 pm. Suspect does not own a gun.

NONE) C. Z. Suspect C. Z. claimed that he was meeting his mother at the airport north of the city on the evening in question. The suspect said that he had met his mother at the gate at approximately 8 pm, and accompanied her to the baggage claim. The mother was contacted and confirmed that the suspect met her at the gate and was with her the rest of the evening. Suspect does not own a gun.

EASY) A. M. Suspect A. M. claimed he was at his friend's house all night on the evening in question. He said that he was there from about 4:30 in the afternoon until approximately 9:00 pm. Suspect also provided a pizza delivery receipt, paid in cash, delivered to the friend's home at 8:07 pm. A statement from the friend was taken. The friend believed that the evening in question was the evening A. M. was there. The friend lives in the central city area. Suspect does not own a gun.

DIFF) B. L. Suspect B. L. said he was entertaining his brother on the evening in question. He said that they were shopping at the mall on the west side of the city. A statement from the brother was taken; the brother claimed they had been in the mall for the entire time between 7:30 and 8:30 pm. Security camera video from the mall shows the suspect in the main lobby area at 7:48 pm. Suspect does not own a gun.

NONE) B. L. Suspect B. L. said he was entertaining his brother in his home on the west side of the city on the evening in question. He said they had ordered pizza. A statement from the brother was taken; the brother claimed they had been in the home for the entire time between 7:30 and 8:30 pm. Suspect does not own a gun.

EASY) C. Z. Suspect C. Z. claimed that he was meeting his mother at the airport north of the city on the evening in question. The suspect said that he had met his mother at the gate, and accompanied her to the baggage claim. He also provided a receipt for a newspaper timed 8:07 pm and paid in cash. The mother was contacted and confirmed that the suspect met her at the gate and was with her the rest of the evening. Suspect does not own a gun.

DIFF) A. M. Suspect A. M. claimed he was at his friend's house all night on the evening in question. He said that he was there from about 4:30 in the afternoon until approximately 9:00 pm. Suspect claimed that at approximately 8:00 pm they went to an ATM machine and a video store. A statement from the friend was taken. The friend believed that the evening in question was the evening A. M. was there. The friend lives in the central city area. Security video from the ATM shows suspect withdrawing money at 8:12 pm. Suspect does not own a gun.

NON-MOTIVATED FAMILIAR OTHER PERSON EVIDENCE

NONE) A. M. Suspect A. M. said he was at a bar on the east side of the city from about 6 pm until the bar closed. He claimed his regular waitress served him, and described the waitress. He claimed he did not leave the bar all evening. The waitress said that she believed he had been present at the bar all evening, and it was unusual for him to leave his table all evening. Suspect has no history of gun ownership.

EASY) B. L. Suspect B. L. claimed that he left work and went to his regular bar and grill on the west side of the city for the evening on the night in question. He claims he had been there between 5:00 pm and 11:30 pm, and produced a receipt for dinner, timed at 8:07 and paid with cash. His regular bartender waited on him. The bartender agreed that the suspect usually visits the bar every week on that same night. He was fairly certain that the suspect had been present in the bar on that evening. Suspect has no history of gun ownership.

DIFF) C. Z. Suspect C. Z. claimed that he had been at a Check-Into-Cash store in the central city between 8:00 and 8:20 pm on the evening in question. He said that he regularly goes to that store to get cash. The teller at the store recognized a picture of the suspect and agreed that he is a regular customer. The teller also indicated that he was there that night. Security camera video from the store showed the suspect in the store between 8:03 and 8:18. Suspect has no history of gun ownership.

NONE) B. L. Suspect B. L. claimed that he left work and went to his regular bar and grill on the west side of the city for the evening on the night in question. He claims he had been there between 5:00 pm and 11:30 pm. His regular bartender waited on him. The bartender agreed that the suspect usually visits the bar every week on that same night. He was fairly certain that the suspect had been present in the bar on that evening. Suspect has no history of gun ownership.

EASY) C. Z. Suspect C. Z. claimed that he had been at a Check-Into-Cash store in the central city between 8:00 and 8:20 pm on the evening in question. He said that he regularly goes to that store to get cash. The teller at the store recognized a picture of the suspect and agreed that he is a regular customer. The teller also indicated that he was there that night. Suspect provided a receipt for the cash, timed 8:07 pm. Suspect has no history of gun ownership.

DIFF) A. M. Suspect A. M. said he was at a bar on the east side of the city from about 6 pm until the bar closed. He claimed his regular waitress served him, and described the waitress. He claimed he did not leave the bar all evening. The waitress said that she believed he had been present at the bar all evening, and it was unusual for him to leave his table. Security video from the bar's entrance showed the suspect entering the bar at 6:12 pm and leaving at 12:44 pm. Suspect has no history of gun ownership.

NONE) C. Z. Suspect C. Z. claimed that he had been at a Check-Into-Cash store in the central city between 8:00 and 8:20 pm on the evening in question. He said that he regularly goes to that store to get cash. The teller at the store recognized a picture of the suspect and agreed that he is a regular customer. The teller also indicated that he was there that night. Suspect has no history of gun ownership.

EASY) A. M. Suspect A. M. said he was at a bar on the east side of the city from about 6 pm until the bar closed. He claimed his regular waitress served him, and described the waitress. He claimed he did not leave the bar all evening, and he produced a receipt for a meal timed 8:07 pm. The waitress said that she believed he had been present at the bar all evening, and it was unusual for him to leave his table. Suspect has no history of gun ownership.

DIFF) B. L. Suspect B. L. claimed that he left work and went to his regular bar and grill on the west side of the city for the evening on the night in question. He claims he had been there between 5:00 pm and 11:30 pm. His regular bartender waited on him. The bartender agreed that the suspect usually visits the bar every week on that same night. He was fairly certain that the suspect had been present in the bar on that evening. Security camera video from the bar's entrance showed the suspect entering the bar at 5:05 pm and leaving at 11:22 pm. Suspect has no history of gun ownership.

NON-MOTIVATED STRANGER PERSON EVIDENCE

NONE) A. M. Suspect A. M. claimed he was in a taxi, in the city, at 8 pm. He said he got into an argument about the fare with the driver of the taxi and took down the number of the taxi as it was leaving. Suspect believed the driver of the taxi would remember him. The taxi driver was contacted and said that he did remember the suspect in his taxi at approximately 8 pm on the evening in question. Suspect has no history of gun ownership.

EASY) B. L. Suspect B. L. said that he was in a bookstore on the north side of the city between 7:30 and 8:30 pm on the evening in question. He claimed to have been alone, but he purchased several items and produced the receipt timed 8:25 pm and paid in cash. The bookstore clerk was also contacted and, after viewing a photo of B. L., stated that he was in the store that night. She believed he had been there between 7:30 and 8:30 pm. Suspect has no history of gun ownership.

DIFF) C. Z. Suspect C. Z. claimed that he had been at a grocery store in the city between 7:45 and 8:30 pm on the evening in question. He said that he had been grocery shopping, and then stopped at the ATM in the grocery store to withdraw cash. After seeing a picture of the suspect, a cashier at the customer service desk said that she remembered seeing the suspect at the store that night at approximately 8 pm. Camera video from the ATM showed the suspect withdrawing money at 8:26 pm. Suspect has no history of gun ownership.

NONE) B. L. Suspect B. L. said that he was in a bookstore on the north side of the city between 7:30 and 8:30 pm on the evening in question. He claimed to have been alone. The bookstore clerk was also contacted and, after viewing a photo of B. L., stated that he was in the store that night. She believed he had been there between 7:30 and 8:30 pm. Suspect has no history of gun ownership.

EASY) C. Z. Suspect C. Z. claimed that he had been at a grocery store in the city between 7:45 and 8:30 pm on the evening in question. He said that he had been grocery shopping, and provided a receipt, paid in cash, timed 8:07 pm. After seeing a picture of the suspect, a cashier at the customer service desk said that she remembered seeing the suspect at the store that night at approximately 8 pm. Suspect has no history of gun ownership.

DIFF) A. M. Suspect A. M. claimed he was in a taxi, in the city, at 8 pm. He said he got into an argument about the fare with the driver of the taxi and took down the number of the taxi as it was leaving. Suspect believed the driver of the taxi would remember him. The taxi driver was contacted and said that he did remember the suspect in his taxi at approximately 8 pm on the evening in question. Security video from the taxi showed the suspect in the taxi between 7:53 and 8:08 pm. Suspect has no history of gun ownership.

NONE) C. Z. Suspect C. Z. claimed that he had been at a grocery store in the city between 7:45 and 8:30 pm on the evening in question. He said that he had been grocery shopping, and that he had been alone. After seeing a picture of the suspect, a cashier at the customer service desk said that she remembered seeing the suspect at the store that night at approximately 8 pm. Suspect has no history of gun ownership.

EASY) A. M. Suspect A. M. claimed he was in a taxi, in the city, at 8 pm. He said he got into an argument about the fare with the driver of the taxi. He produced a receipt which was paid in cash and timed 8:07 pm. Suspect believed the driver of the taxi would remember him. The taxi driver was contacted and said that he did remember the suspect in his taxi at approximately 8 pm on the evening in question. Suspect has no history of gun ownership.

DIFF) B. L. Suspect B. L. said that he was in a bookstore on the north side of the city between 7:30 and 8:30 pm on the evening in question. He claimed to have been alone. The bookstore clerk was also contacted and, after viewing a photo of B. L., stated that he was in the store that night. She believed he had been there between 7:30 and 8:30 pm. Security video from the bookstore shows the suspect in the store between 7:34 and 8:21 pm. Suspect has no history of gun ownership.

APPENDIX D

Debriefing

Thank you for your participation. Now, I'd like to tell you what this study is about. First, I need to tell you that this was not an actual case. We created this case in order to test some ideas about how people evaluate alibis. Also, we told you that there would be six suspects to evaluate, but you only evaluated three. The reason we told you there were six was to prevent you from treating the last suspect differently from the first suspects, which tends to happen when people think they are at the end of a list.

It might surprise you to learn that there is almost no research on the question of how people evaluate alibis. One thing that we do know, however, is that many people who have been convicted of crimes that they did not commit had alibis that were not persuasive to the police, the prosecutors, the judges, or the jury.

We have some ideas about what kinds of information or evidence that people may tend to use to evaluate in deciding whether an alibi is a "strong" alibi or a "weak" alibi—we're trying to get a handle on what makes a strong alibi different from a weak alibi. Specifically, we think that people will use both physical evidence and person evidence when they evaluate alibis. Perhaps physical evidence tends to overwhelm whatever person evidence an alibi provider may offer to support their alibi. It is relatively easy to imagine that a person might lie or be mistaken, and so evaluators may dismiss that evidence. In addition, we think that perhaps people may find a stranger to be more credible than the persons' mother.

In order to tease apart some of these factors and to compare responses, we created several alibis, of which you saw only three. If we were to ask you to evaluate all of them, you would have been overwhelmed and perhaps you would have treated the later ones differently from the first.

Keep in mind that there are no right or wrong answers to the questions we asked you. No matter how you answered, your information is very valuable to us. Understanding how people evaluate alibis can help us to understand why truthful alibis from innocent people couldn't keep them from being convicted, and we can also learn about how people reason about complex problems.

ACKNOWLEDGEMENTS

First and foremost, I would like to express my gratitude and appreciation to my major professor, Gary Wells, without whom my graduate career would be less interesting by a factor of three and far less enjoyable. Thanks also to my thesis committee, who helped this thesis become stronger and more polished with helpful suggestions. Amy Bradfield and Steve Charman offered helpful comments on earlier drafts, and Tiffany Laborde helped collect all this fabulous data. I'd like to thank the whole Vorndran clan: they don't particularly care about the research, but at least now they can sit around and be proud. And saving the best for last, I would like to thank my husband, Mike Olson, who has loved and helped me in countless ways, and who is my best alibi.