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# Would You Lie For Me? : Alibi Corroboration Between Strangers And Non-Strangers

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WOULD YOU LIE FOR ME? ALIBI CORROBORATION BETWEEN STRANGERS  
AND NON-STRANGERS

By

Stéphanie B. Marion, B.Sc., University of Toronto at Mississauga, Toronto, June 2008

A thesis

presented to Ryerson University

in partial fulfillment of the

requirements for the degree of

Master of Arts

in the program of

Psychology

Toronto, Ontario, Canada, 2010

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WOULD YOU LIE FOR ME? ALIBI CORROBORATION BETWEEN STRANGERS  
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Master of Arts, May 2010

Stéphanie B. Marion

Psychology

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To test the assumption that individuals who share a personal relationship are more likely to corroborate one another's false alibi than are strangers, 81 undergraduate students were provided the opportunity to either corroborate or refute a confederate's alibi for a suspected theft. In a 'friendship' condition, feelings of affiliation between the participant and the confederate were experimentally induced by increasing the perceived similarity between the pair, and by having the pair interact during a collaborative task. Later during the experimental session the confederate became a suspect for a mock crime and provided a false alibi that she was with the participant during the entire session. Contrary to what we hypothesized, participants in the 'stranger' condition were as likely to corroborate the false alibi as those who underwent friendship-enhancing activities. When the confederate acted in a highly suspicious manner, however, she was much less likely to have her false alibi corroborated by participant than when the confederate's behaviour was less suspicious. The results put into question our assumptions of what makes a credible witness and emphasizes the need for further empirical research on the behaviour of alibi corroboration.



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The criminal justice systems in North America are not fail-safe. With the advent of improved investigative technology, and especially DNA-typing technology, many Canadian and American citizens convicted of heinous crimes have subsequently been found innocent and have ultimately been exonerated. In many cases the wrongfully-convicted individuals had served many years in prison before the courts recognized their innocence ([www.innocenceproject.org](http://www.innocenceproject.org)). These highly provocative and emotionally-laden legal mistakes and the realization that wrongful incarceration was the fate of more than a few unlucky individuals prompted social scientists to examine these cases in an effort to understand why these errors occurred. Weak alibi evidence ranks high in the list of common contributing factors that have been found to lead to wrongful convictions (Burke, Turtle, & Olson, 2006). An alibi is a statement made by a suspect or a defendant that places him or her in a different location than the crime scene at the time that the crime occurred. An alibi, if true, makes it impossible for a suspect or a defendant to have committed the crime in question. It may seem ironic, then, to say that any kind of alibi evidence could contribute to wrongful convictions. A weak alibi, or in other words an alibi that is weakly supported, however, may not efficiently convey the impression of innocence to investigators or jurors, regardless of its truthfulness. It is in this context that weak alibi evidence can, and does contribute to the conviction of innocent persons (Olson & Wells, 2004).

The weakness or strength of an alibi depends on the type and quality of the evidence supporting it (Olson & Wells, 2004). This evidence can take the form of either person evidence or physical evidence. An alibi witness (or alibi corroborator) is a person who can attest to the defendant's whereabouts at the time of the crime. In essence an alibi witness serves the same function as an eyewitness who identifies a defendant: to place the defendant at a certain location at a certain time. The differences are that eyewitnesses are called by the Crown or prosecutor

and alibi witnesses are called by the defense, and that eyewitnesses are usually strangers whereas alibi witnesses are usually friends or family members of the defendant (Burke & Turtle, 2003). It seems to be this latter difference that is critical to the perceived strength or weakness of an alibi. When two individuals give contradictory accounts of an event, one can assume that the party who has the least interest in the outcome may be providing the most objective and accurate account. Therefore, eyewitnesses to a crime, unless they are victims, are usually individuals who can be assumed, by virtue of being unrelated to the defendant, to be objective in their testimony, a fact that likely contributes to the strong impact that such witnesses have on a jury. However when it comes to alibi witnesses, a disinterested witness is the exception rather than the rule. Alibis are often corroborated by motivated others and such evidence is evaluated with much skepticism (e.g. Culhane & Hosch, 2004; Hosch, Culhane, Jolly, Chavez & Hawley, in press; Lindsay, Lim, Marando, & Cully, 1986). This brings us to a rather disconcerting realization that although our criminal justice system contends that a person is considered innocent until he or she has been proven guilty, the research on alibi evidence would suggest otherwise; a defendant who is not successful at convincing a jury that he or she is innocent (i.e. a defendant who does not provide strong alibi evidence) may be at an increased risk of being wrongfully convicted. As will be discussed further, defendants are often perceived as more or less guilty depending on the strength of their alibi evidence. When no physical evidence is presented in support of an alibi, the relationship between the alibi witness and the defendant is a strong determinant of perceived alibi strength (Hosch et al., in press; Olson & Wells, 2004). This evaluation seems to be due to the tacit and unvalidated assumption that those who are close to another are more likely to lie for one another than are strangers (Burke et al., 2006).

This section will offer a critical review of the literature on the study of alibi evidence to date. Since it is still in its infancy, a discussion of how alibi research has grown out of the eyewitness literature and from initial examinations of wrongful convictions will be presented. The remainder of the review will focus on research pertaining to the evaluation of alibi evidence in the context of both the investigative process and criminal trials, and will discuss the few studies that have investigated the general public's opinions regarding alibi generation and alibi corroboration. A discussion of the psychology of altruistic behaviour and compliance will follow, as witness corroboration of a false alibi can be regarded as one or both of these types of behaviour. The section will close with a brief summary of the review and a statement of the research questions addressed along with the hypotheses tested in this thesis.

### **Alibis and Wrongful Convictions**

Advances in forensic sciences in the last quarter century have made it possible, in certain cases, to determine with high likelihood the guilt or innocence of an individual. For example DNA evidence from a closed case, if it exists, can now be tested (or re-tested) and provide either strong support for the guilt of a suspect or convict, or even stronger support for a suspect or convicted individual's claim of innocence. Individuals who claimed to have been wrongfully convicted now could, with the help of advocacy groups, request to have their case evidence retested and, in many cases, could be proven innocent. Since the early 1990s, many individuals across North America have indeed been exonerated of crimes for which, in many cases, they had already served many years of their sentence (with an average of 12 years of incarceration) before they were released by the courts ([www.aidwyc.org](http://www.aidwyc.org); [www.innocenceproject.org](http://www.innocenceproject.org)).

Despite numerous identified cases, the actual rate of wrongful conviction is currently unknown, and it is likely to remain so; it is nearly impossible to determine the true guilt or

innocence of those who are currently incarcerated, those who served their sentence and are now released, or those who have been executed. In addition to time and manpower constraints that can limit the number of cases that can be re-examined, the efforts of the organizations committed to freeing the wrongfully convicted are often limited to specific subsets of the inmate population. The Innocence Project, which was the first of these organizations and is probably the largest, has been involved in 252 successful exoneration cases in the United States since 1992. However, the Innocence Project takes on only those cases in which DNA evidence exists, such as rape and/or homicide cases. According to recent surveys of U.S. District Attorneys' office, most jurisdictions test DNA evidence in only about 25% of homicide cases, between 25% and 50% of sexual assault cases and in less than 25% of other types of criminal cases (Prottas & Noble, 2007). Similarly in Canada, the Association in Defence of the Wrongly Convicted (AIDWYC) has helped to free 31 innocent individuals since its inception in 1993, but currently only takes on homicide cases ([www.aidwyc.org](http://www.aidwyc.org)). According to the Canadian Centre of Justice Statistics, less than .09% of individuals accused of crimes against persons or property in 2003 were accused of homicide (Statistics Canada, 2004). Assuming that the investigative and judicial errors that lead to wrongful convictions in homicide and rape cases are as likely to occur in other types of criminal cases, it would be expected that many wrongful convictions go undetected or are otherwise not addressed due to their less serious nature (e.g. a break and enter conviction carrying a 5 month sentence). As Garrett (2008) puts it, the portion of current exonerees is but "the tip of an iceberg" (p.5).

These injustices have prompted scholars to examine the exoneration cases in an effort to shed some light onto some common contributing factors of wrongful convictions (e.g. Connors, Lundregan, Miller, & McEwen, 1996; Garrett, 2008; Wells et al., 1998). Eyewitness

identification errors, misuse of forensic evidence or expert misconduct, false confessions, and unreliable informant testimony were the most common factors listed by Connors et al. (1996) and Garrett (2008). However, both reports also mentioned that alibi evidence was frequently presented at trial but was nevertheless ineffective. For example, Timothy Durham of Oklahoma was wrongfully convicted of raping a child, even after 11 witnesses testified that he was in a different state at the time of the crime ([www.innocenceproject.org](http://www.innocenceproject.org)). He was finally exonerated with the help of DNA evidence that excluded him as the perpetrator, but only after having served 10 years of his sentence.

Connors et al. (1996) listed the presence of a “weak alibi” in 7 of the first 28 cases undertaken by the Innocence Project. Ten years and 157 cases later, this rate has remained consistent; a weak alibi still appears to be a contributing factor in approximately 25% of all wrongful conviction cases, and is now recognized as one of the leading contributing factors (Burke et al., 2006). But what exactly is a “weak alibi”? The term was first used by Connors et al. (1996) and later by Wells et al. (1998) in reference to cases where a defendant’s alibi information was presented in the trial but ultimately rejected by the decision-makers, but these authors did not explicitly define the term. An examination of the case summaries in question, however, suggests that it refers to an alibi that is either not corroborated, or one that is corroborated by individuals who share a personal relationship with the accused, such as family members, romantic partners, or friends of the accused. For example, Michel Dumont of Montréal, Québec, was found guilty in 1992 of the violent rape of a woman ([www.aidwyc.org](http://www.aidwyc.org)) and sentenced to more than four years in prison. Dumont was convicted despite an alibi that was corroborated by at least 5 others, and only one eyewitness (the victim) identified him as the perpetrator. However the only witnesses who could confirm Dumont’s alibi that he was at a

social outing were his friends and family members. Dumont spent almost three years incarcerated, and another seven years trying to clear his name. His conviction was finally overturned when the victim recanted her original identification of Mr. Dumont after spotting another man she now believes is her real assailant. As it turns out, many of the alibis provided by individuals who were later exonerated were initially corroborated by people who can be argued to have an interest in the outcome of the trial, namely friends and family members of the accused. It would seem that such witnesses are not very effective at convincing a jury of a defendant's innocence. This makes intuitive sense, as friends and family members may be more motivated to lie for one another than are strangers. It may also be that the relationship between the defendant and the alibi witness does not even have to be very intimate for the evidence to be disregarded by the jury. An example of this is the case of Edward Honaker, who was charged with sexual assault, sodomy, and rape. His alibi that he had been at his brother's residence during the time of the crime was corroborated by two family members, but also by his mother's roommate and a trailer park owner (Connors et al., 1996). Despite having several alibi witnesses, his defence was still ineffective and, due primarily to two eyewitnesses who identified him as the perpetrator and an additional third eyewitness who claimed that Honaker resembled her assailant, Honaker was convicted of all counts and sentenced to over three life terms in prison. As will be discussed below, the idea that alibi witnesses who are close to the defendant are not believed to be as credible as those who do not know the defendant has been supported by empirical research on alibis.

### **Alibi Evidence in Criminal Cases**

The research interest in the psychology of alibis is relatively new and the empirical literature on this topic is somewhat limited in scope but growing rapidly. The published research

that investigates the effect of the defendant-witness relationship on the evaluation of alibi evidence can generally be classified into three categories: 1) studies investigating the perception of alibis provided by a suspect in the context of an investigation, 2) studies investigating the perception of alibis provided by a defendant in the context of a trial, and 3) studies examining the generation of alibis and corroborating evidence.

**Credibility of alibis and alibi witnesses during the investigative phase.** Having recognized that true alibi evidence is not always effective at keeping innocent individuals out of court and prison, several researchers attempted to systematically examine the factors that influence people's perceptions of the believability of alibis. Olson and Wells (2004) proposed a taxonomy of alibi strength based on two types of corroboration evidence: person evidence (i.e. alibi witnesses) and physical evidence. Physical evidence can vary in terms of ease of fabrication (e.g. store receipt vs. surveillance video), and person evidence can vary in terms of the relationship between the witness and the defendant. They tested their taxonomy by comparing participants' evaluations of different alibis in the context of a criminal investigation. Their participants were instructed to play the role of mock investigators, and to evaluate the believability of three alibis and provide a judgment of the likelihood of each suspect's guilt. The relationship of the witness to the defendant was a between-subject factor; therefore all three alibis were presented with either no corroborating evidence, corroboration by three different "motivated others" (a friend or family member, e.g. mother, brother, and best friend), corroboration by three different "non-motivated strangers" (an individual who had not encountered the defendant prior to the purported alibi, e.g. grocery store cashier), or corroboration by three different "non-motivated familiar others" (an individual who is familiar with and could easily identify the defendant, yet does not share a personal relationship with him

or her, e.g. a clerk at a store frequently visited by the defendant). When there was no physical evidence offered by the defence in support of the alibi, mock investigators rated alibis that were corroborated by a non-motivated stranger as more believable than alibis that were not corroborated or were corroborated by a motivated other. In fact, believability ratings of alibis corroborated by a friend or a family member were not statistically different from believability ratings of alibis that were offered by the defendant but not corroborated by any witness. Furthermore, in the absence of corroborating physical evidence, only suspects whose alibis were corroborated by non-motivated strangers were rated as significantly less likely to be the culprit than suspects whose alibis were not corroborated by anyone. The participants in this study did not evaluate all alibis equally: they judged alibis that were corroborated by individuals who are less interested in the outcome of the case to be more believable than alibis that were corroborated by those who are likely biased in favour of the defendant, and this imbalance in alibi believability judgments also translated into differential beliefs in guilt.

It would seem, then, that the believability of an alibi is highly dependent on the relationship between the suspect and the corroborating witness, and that alibi corroboration from an individual who shares a personal relationship with a suspect is no more beneficial to him or her than offering an alibi that is not corroborated by anyone at all. While it could be argued that asking participants to play the role of an investigator lacks external validity, recent research examining how actual police officers evaluate the alibis of real suspects suggests that police officers and lay persons are very similar in their assessments of alibis. Dysart and Strange (2010) asked senior members of a U.S. police agency to describe what they believed are the characteristics of a truthful alibi. Their responses mirrored those of Olson and Wells' participants; they believed the most credible alibis to be those that can be corroborated by

physical evidence or by a non-motivated other. Police officers did acknowledge, however, that the presence of physical evidence or of a non-motivated witness does not guarantee the veracity of an alibi, that corroborating physical evidence is rather rare in alibi investigations, and that there is always a possibility that non-motivated witnesses will lie to police (Dysart & Strange, 2010).

The only study to date that suggests that a motivated alibi witness does have the potential to help a suspect under investigation was conducted by Sommers and Douglass (2007). Instead of manipulating the relationship between a suspect and the alibi corroborator, they manipulated the context in which the alibi was provided. Half of their participants were asked to play the role of an investigator and the other half were asked to play the role of a juror. When asked to evaluate the believability of an alibi (that was either corroborated by a family member or by no one), participant-investigators rated the corroborated alibi as significantly more believable than the uncorroborated alibi, despite the motivated nature of the witness. Participants in this condition also gave the suspect a lower likelihood-of-guilt rating when the alibi was corroborated. However, when evidence was presented in a trial context, participant-jurors perceived corroborated alibis to be as unreliable as non-corroborated alibis. These results suggest that, at least for laypersons, the importance of the relationship between a defendant and an alibi witness in determining the strength of the alibi may depend on the legal context in which it is offered. It is also possible that, like participant-investigators, police officers may be less distrusting of alibi corroboration by motivated others than jurors, while still believing alibis corroborated by unmotivated others to a greater extent (as suggested by responses on the Dysart and Strange, 2010 survey).

**Credibility of alibis and alibi witnesses during the trial phase.** The examination of alibi evidence within a trial context emerged from mock juror studies that primarily investigated the effect of eyewitness testimony on verdict choice. In these early studies, alibi witnesses were treated as theoretically equivalent to eyewitnesses; both types of witnesses testified that they had seen the defendant at the time of the crime, however the eyewitness claimed that he or she was at the crime scene whereas the alibi witness claimed that he or she was elsewhere.

The findings of a mock juror study by Lindsay et al. (1986) were the first to suggest that the influence of alibi testimony on juror verdicts may depend on the characteristics of a corroborating witness. The main focus of their study was to investigate the effect of the degree of consistency of identification testimony on juror verdicts using a videotaped simulated trial. In addition to testimony from an eyewitness who identified the defendant as the perpetrator, participants viewed the testimony from 1) a second identifying eyewitness, 2) a second eyewitness who testified that the defendant was not the perpetrator, 3) an alibi witness who was a stranger to the defendant, 4) an alibi witness who was a family member of the defendant, or 5) no additional witness. Cases in which an eyewitness identified the defendant as the perpetrator and a stranger corroborated the defendant's alibi yielded a lower guilty verdict rate (27%) than cases in which there were only 1 or 2 eyewitness identifications and no alibi corroborator (60% and 80%, respectively). In fact, the rate of guilty verdicts when a stranger corroborator testified was equal to that when an eyewitness to the crime testified that the defendant was not the perpetrator. However, cases in which an eyewitness identified the defendant and a family member corroborated the alibi did not yield a significantly lower rate of guilty verdicts (57%) than cases in which there were only eyewitness identifications. Therefore, it seems that alibi evidence in the form of testimony from a defendant's relative does not help the defence very much, if at all.

Recent research that directly investigated the effect of alibi evidence on juror perceptions also lends support to the idea that the believability of alibis is strongly influenced by the relationship between the alibi witness and the defendant. Culhane and Hosch (2004) conducted a mock juror study to investigate whether an alibi witness who has a personal relationship with the defendant, but is not a family member (e.g. a girlfriend), is met with the same distrust as is an alibi corroborator who is a relative of the defendant, or whether such a witness is perceived to be as credible as an alibi corroborator who is merely an acquaintance of the defendant (e.g. a neighbour). Mock jurors read a criminal trial summary that included testimony from an identifying eyewitness in addition to 1) corroborating testimony from the defendant's girlfriend, 2) corroborating testimony from the defendant's neighbour, or 3) no alibi witness. The participants rendered significantly fewer guilty verdicts when an alibi was corroborated by the defendant's neighbour than when it was corroborated by the defendant's girlfriend. Additionally, the neighbour's testimony significantly decreased guilty verdicts in contrast to conditions where no alibi evidence was presented by the defense, whereas the girlfriend's testimony did not (Culhane & Hosch, 2004). Although this study did not allow for the comparison between alibi witnesses who share a close, non-familial relationship with a defendant and alibi witnesses who are biologically related to a defendant, these results suggest that the credibility of alibi evidence may decrease as the relationship between the defendant and alibi witness increases in strength.

Hosch et al. (in press) aimed to better understand the association between the strength of the relationship between a defendant and an alibi witness and the perceived strength (i.e. believability) of an alibi. They approached the topic from a kinship theory perspective and were interested in both the type of relationship between a defendant and a witness (i.e. biological,

affinal, or social) as well as the degree of relatedness (i.e. close vs. distant). Their first study reports the findings from a survey of jury-eligible participants' opinions of the likelihood of deceit of several alibi witnesses who varied in type and strength of relationship to the defendant. Participants rated alibis corroborated by biologically-related witnesses as less credible (62% likelihood that such witness would lie) than alibis corroborated by affinely-related witnesses (i.e. witnesses related by marriage, 50%), and the latter as less credible than alibis corroborated by witnesses who are socially-related, or are not related at all to the defendant (32%). It is important to note here that social relationships included a range of individuals from one's best friend to a complete stranger. They also found linear relationships between credibility ratings and the degree of relatedness within biological, affinal, and social affiliations. For example, participants thought that a defendant's sister would be more likely to lie (78% of the time) than a defendant's cousin (61%), and a defendant's best friend would be more likely to lie (78%) than a defendant's co-worker (31%).

To see whether the difference in credibility ratings of jury-eligible individuals would translate into different juror decision-making, Hosch et al. (in press) conducted a second study, this time examining mock-juror's perceptions of alibi witnesses of various affinity to the defendant. Participants read a case summary and provided believability ratings, verdict choice, and ratings of likelihood of guilt. Participants found the testimony of socially-related alibi witnesses to be significantly more believable than the testimony of biologically-related witnesses. There were no differences between the affinely-related witness and the other two types of witnesses. Hosch et al. did not find a main effect of degree of relatedness on believability or verdict. The interaction of relationship type and degree of relatedness on guilt ratings approached significance: cases in which the alibi witness was biologically related to the

defendant yielded higher ratings of guilt than cases in which the alibi was socially related, but only when the degree of relatedness was low (i.e. distant relationships). Although the effects of relationship type and degree of relationship of this study do not appear to be as robust as the effects found in their first survey study, this is likely explained by the fact that physical evidence (either weak or strong) in support of the alibi was always presented in the case summary. In the mock investigator study by Olson and Wells (2004) described at the beginning of this section, the effect of the relationship between a suspect and an alibi corroborator on alibi believability disappeared with the introduction of even the weakest form of physical evidence. This suggests that any real alibi witness affect is overshadowed by the strong influence of any kind of physical evidence.

What is clear from the set of studies by Hosch et al. (in press), however, is that people do expect alibi witnesses to lie in court, and they expect those who are closely related to the defendant to be more likely to lie than those less closely related to the defendant. A survey study by Culhane, Hosch, and Kehn (2008) also supported this notion. They created, then administered, the Alibi Belief Questionnaire (ABQ) to a large sample of students. Their results indicated that participants on average believed that slightly more than 50% of motivated alibi witnesses who testify in court are lying, and that a large proportion of participants (42%) believed that the majority of all alibi witnesses who testify in court are lying. They also found that participants believed that 70% of alibi witnesses are friends or family members of the defendant which, as we will reveal shortly, is an underestimate.

**Alibi generation and the reliance on witness evidence.** In a review of 175 Canadian and American criminal court cases in which an alibi was presented at trial, Burke and Turtle (2003) observed that in 86% of the Canadian cases and 68% of the American cases the alibi

provided by the defendant was corroborated by a witness. Contrary to the beliefs of participants in Culhane et al.'s (2008) study, all but two of these corroborating witnesses (or more than 98%) were friends, family members, or co-workers of the accused. Additionally, in only 2% of the Canadian cases and 14% of the American cases the defendant had physical evidence to support his or her alibi. Furthermore, the sample of experienced police officers surveyed by Dysart and Strange (2010) estimated that physical evidence in support of an alibi is only obtained in 20% of cases. These figures present an obvious irony: The alibi evidence most relied upon by real defendants (i.e. having their story confirmed by individuals close to them) is the type of evidence least believed by those who investigate crimes and courtroom decision-makers.

It is possible that guilty individuals are more likely, for obvious reasons, to have “weak” alibi evidence (e.g. corroboration from a family member and no physical evidence) than innocent individuals, and that a great majority of defendants from the sample of cases in Burke and Turtle (2003) were in fact guilty. If this is the case, *and* if a sample of known innocent defendants indicated the opposite trend, then people’s perceptions of weak and strong alibi evidence would be validated and would be of little concern. However as we now know from the Innocent Project cases and other wrongful conviction cases, innocent defendants also often present weak evidence in support of their alibi. Presumably, if they had presented a strong alibi, they would not have been convicted.

To study individuals’ reliance on witness evidence more systematically, Culhane et al. (2008) conducted a survey study that examined, among other things, 1) who it is that people would rely on to provide true and false alibi corroboration and 2) the likelihood that people can generate a true alibi, along with person and physical evidence to corroborate that alibi. They found that 88% of participants believed they could find a person to corroborate their true alibi.

More importantly, however, 84% of the potential alibi witnesses listed were motivated others, whereas 16% were non-motivated others. A significantly lower proportion of participants (29%) believed they could find physical evidence to corroborate a true alibi. In regards to false alibis, 61% of participants also thought they could find a witness to corroborate a false alibi, and of those potential false alibi witnesses listed, 97% were motivated others. Thirty-four percent also believed they could fabricate physical evidence to support a false alibi. What is interesting about these figures is that although motivated witnesses may be relied upon to a greater extent for corroboration of false alibis, both true and false alibis are much more likely to be corroborated by motivated others ( 84% and 97%, respectively). Also, a slightly greater percentage of participants thought that they could fabricate physical evidence to support a false alibi (34%) than obtain real physical evidence to support a true alibi (29%). This suggests that a decision of the credibility of an alibi based on the presence or absence of corroborating physical evidence may be faulty.

Instead of asking individuals' beliefs in their ability to obtain false and true alibi corroboration, Hosch et al. (in press) in their first study asked their juror-eligible participants how willing they would be to corroborate someone else's false alibi. They were interested to see if willingness to lie is dependent on relationship type and degree of relatedness. When participants were asked how likely they themselves would be to lie in court for various people in their lives, they reported being most likely to lie for biologically-related others, followed by affinely-related others, and were least likely to lie for socially-related others. There were also linear relationships between the degree of relatedness within each relationship type, and willingness to lie. For example more participants reported being willing to lie for their wife (82%) than for their sister-in-law (45%), and more participants reported being willing to lie for a

co-worker (22%) than for a familiar stranger (9%). These results do suggest that a motivated alibi witness presents a higher risk of deceit than a non-motivated witness, although in the latter case the risk is not completely eliminated. Of course, participants in the two studies described above were not asked to obtain corroborating evidence for true or false alibis, nor were they asked to actually lie for anyone, therefore these figures can only give us a rough estimate of the actual frequency with which people lie for one another. Nevertheless, there is intuitive appeal to the notion that individuals who are close to one another and who have socially or biologically invested in another would act in a way that would promote the quality and longevity of the relationship.

### **The Social Behavioural Aspect of Alibi Corroboration**

The research findings and the real-life examples of ineffective alibi defences described earlier are generally explained in the literature by an assumption that is seemingly held by judges, jurors, and lay persons: Family members, romantic partners, and close friends are motivated to lie for one another, for example by providing a fabricated alibi, which in turn decreases the believability of their corroborating testimony (Burke et al. 2004, Olson & Wells, 2004). Some indication of the plausibility of this idea comes from early theories of kin selection and reciprocal altruism, and also from empirical social psychology literature on helping and compliance. The evolutionary theory of kin selection (Hamilton, 1964) explains altruism between close relatives in terms of reproductive fitness. Someone who is closely related to another may behave in an altruistic way towards this person despite the risk or cost associated with the behaviour because of the increased chance that the genes that are shared between the two individuals will be passed on to future generations. Therefore according to kin selection theory, and as Hosch et al.'s (in press) aforementioned findings would suggest, individuals who

share much of their genetic component, such as parent-child pairs and siblings, should be more likely to act altruistically toward one another than those who share fewer of their genes, such as cousins or unrelated friends. This would explain why a mother may be very likely to corroborate her son's false alibi, despite the risks associated with lying, in order to increase her son's chances of success (with general success in life translating to successful reproduction). Trivers' (1971) theory of reciprocal altruism, on the other hand, explains how altruistic behaviour between two individuals can be adaptive, even if they are not related. Helping someone when they are in need, even if a cost is associated with this help and the recipient of the altruistic act is not genetically related, can be beneficial to an individual if the act is reciprocated at a later time when he or she is in need. Reciprocal altruism is most likely to happen when the two individuals in question are socially related (e.g. members of a same community) and when there is a high likelihood that they will interact again in the future. This theory would therefore explain why friends, co-workers, or neighbours might be willing to lie for one another by corroborating a false alibi despite their lack of biological relationship. These individuals are likely part of at least one common social group, and likely interact on a regular basis.

The psychological literature on helping behaviour also supports the idea that individuals who feel a sense of communality (i.e. are responsive to and feel responsible for others' needs, and expect others to be responsive to their own needs) are more likely to help one another than those who do not. For example, an experiment by Clark, Ouellette, Powell, and Milberg (1987) demonstrated how experimentally-manipulated feelings of communality could elicit helping behaviours. Feelings of communality were induced by making participants believe that the other participant they were assigned to work with had signed up for the study because they perceived it as an opportunity to meet new friends. Participants in whom feelings of communality were

induced were more likely to help, and helped to a greater extent, than participants in whom communality was not induced. In this situation, the helping behaviour (preparing materials for a filler task) was not directly requested from the recipient but was rather casually suggested by the experimenter, and help was provided by participants when the recipient of the help was not physically present. This suggests that altruism, such as corroboration of a false alibi, can possibly be elicited without a direct request, and without the recipient's explicit and immediate knowledge of the altruistic act.

Social scientists have also demonstrated that people comply more readily to requests from likeable individuals (Cialdini & Trost, 1998). To the extent that we like those with whom we share personal relationships, it is reasonable to assume that friends and family members of a defendant may be more likely to corroborate a false alibi than individuals who do not know the defendant. It is also possible to increase the degree to which individuals like one another. Researchers have successfully increased liking between two individuals by manipulating similarity of opinions, personality, or personal characteristics (e.g. Byrne, 1997), the degree to which one person believes the other person likes them (e.g. Drachman, deCarufel, & Insko, 1978), the degree to which they work together toward a common goal (e.g. Cook, 1990), or simply the amount of interaction between the two (e.g. Insko & Wilson, 1977). Burger, Soroka, Gonzago, Murphy, and Somervell (2001) were successful in increasing participants' rate of compliance to a confederate's request by experimentally manipulating the degree of perceived affiliation between the participant and the confederate. Participants who had a short conversation with a confederate, who were made to believe that the confederate was similar to themselves, and even those who were only in close physical proximity to a confederate were more likely to agree to write a critique of the confederate's essay. This relationship was partially

mediated by ratings of liking; the relationship between similarity and compliance was significantly decreased, but not eliminated, when a measure of participants' liking of the confederate was included in the regression model. The researchers suggested that people use a social heuristic that states that we conform to requests from those we like in order to quickly and appropriately respond to friends and family. The increased liking between the participant and the confederate demonstrated in this study, however ephemeral, would have activated this heuristic and promoted compliance (Burger et al., 2001). It is therefore possible that when individuals are asked to either corroborate or reject a friend's alibi, for example, their automatic and socially-appropriate response is to conform to the friend's statement and corroborate the alibi even if it is false.

### **Summary, Purpose, and Hypotheses**

We can conclude from the research on alibi evidence that the relationship between an alibi witness and a defendant is a strong determinant of the perceived credibility of an alibi in both an investigative context and a trial context. Alibi witnesses who are close to a defendant are less believed than alibi witnesses who do not share a personal relationship with the defendant. The relationship effect may be overshadowed by the presence of corroborating physical evidence, but this situation seems to be the exception rather than the rule. The type of motivated witness (i.e. biological, affinal, or social) may also be a beneficial way to categorize alibi witnesses, although there is much overlap in believability ratings of witnesses within these categories. The degree of relatedness may be more useful than simple relationship type in evaluating the risk that a witness might lie as it may constitute a more precise estimate of likelihood of deceit. Findings from survey studies suggest that there might be a valid reason to disbelieve alibi witnesses who are very close to a defendant: people report being more willing to

lie for close other than for more distant others, however close others are also more relied upon for corroborating both true and false alibis. Evolutionary psychology and social psychology theories would also predict that family members and friends would indeed be more likely to lie for one another and protect one another than would strangers or those who are more distantly related. However, this self-reported and widely held assumption that friends are more likely to lie for one another than are strangers, has never been empirically tested. The goal of this study is therefore to investigate its validity with the use of an innovative experimental design.

In this experiment we measured the rate of corroboration of a false alibi between pairs of individuals who were strangers and pairs of individuals who were acquainted through friendship-enhancing activities. All pairs consisted of a participant and a confederate who, during the experimental session, became the suspect of a mock crime. In one half of cases the participants were exposed to highly suspicious physical evidence against the confederate, and in the other half of cases the participants were not exposed to any physical evidence against the confederate. The physical evidence manipulation is of practical importance because we believe that it is possible that some individuals may be tempted to lie about a defendant's whereabouts because they believe him or her to be innocent but they also believe that telling the truth will inadvertently suggest possible guilt. This is perhaps most likely to happen when the physical evidence against the defendant is ambiguous (as in the no physical evidence conditions in this study). An example of this kind of situation would be one in which a women's son is being accused of a crime that occurred on a day when her son was home with her for almost the entire day. The only time he was out was when he left to go jogging for about an hour. The woman doesn't have any reason to believe that her son is guilty, but doesn't want to admit the he indeed left the house that day in fear of contributing to her son's prosecution.

In this study, it was hypothesized that participants who felt closer to the confederate (i.e. those in the friendship condition) would be more likely to corroborate the confederate's false alibi than participants who did not form any significant bond with the confederate (Hypothesis 1), and that participants would be less likely to corroborate the false alibi when there was suspicious physical evidence than when there was no evidence against the confederate (Hypothesis 2). It was also hypothesized that the level of physical evidence would interact with the relationship between the confederate and participant such that participants in the friendship condition would be more likely to corroborate the alibi than those in the stranger condition, but especially when there was no physical evidence against the confederate (Hypothesis 3).



## Method

### Design and Overview

We tested our hypotheses using a 2(relationship condition)  $\times$  2(suspicion level) between-subjects factorial study design. Participants were assigned to either a friendship or a stranger condition and to either a low or high suspicion condition. All participants were tested one at a time as each interacted with a confederate under the pretext of a study investigating the role of personality similarity on cognitive task performance. During the first part of the session, we manipulated the participant's perceived liking of the confederate. In the friendship condition we told the pair that their personalities were similar, and they then interacted during the completion of a group task. In the stranger condition, we told the dyad that their personalities were dissimilar, and they then completed individual tasks. During the second part of the session all pairs completed a set of group tasks. During this task the confederate left momentarily to use the restroom. In the high suspicion condition the confederate returned from the restroom with money, but not in the low suspicion condition. After the set of tasks was completed the experimenter told the pair that a theft had taken place nearby. The pair was questioned and the confederate offered a false alibi that they were both in the testing room the entire time. The experimenter later asked the participant to either corroborate or reject the confederate's false alibi. The participant's response was the main dependent variable.

### Participants

Eighty-four women took part in the study. All participants were undergraduate students enrolled in an introductory psychology course and each received one course credit as compensation for their participation. Their age ranged from 17 to 45 years with an average of 20.33 years ( $SD = 5.09$ ). The study was advertised on SONA, an online experiment management

system, under the title “Does Personality Affect Group Performance?” (Appendix A). In order for students to be able to sign up for this study, they needed to have 1) completed a pre-screen survey on the SONA system that included a personality questionnaire and 2) indicated that they were female. Three participants were dropped from the data set and subsequent analyses due to their disbelief of the cover story and their correct suspicions as to the purpose of the study, as indicated by them to the experimenter during the debriefing session.

### Setting and Apparatus

The experimental session took place in a small room (approximately 7' × 10') adjacent to the lab office. There were other psychology labs and testing rooms along the same hallway. At the start of the session and during the group tasks, the participant and confederate were seated opposite one another at a table (figure 1). The door was kept shut during the experiment with the

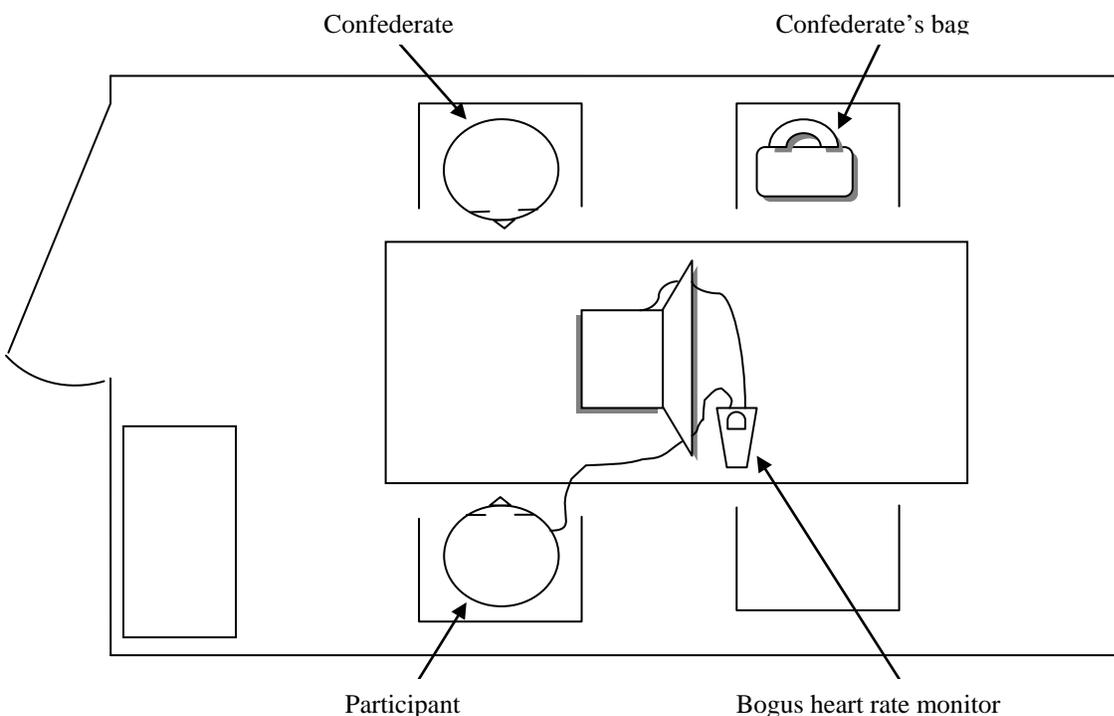


Figure 1. Diagram of setting, view from the top.

exception of when the experimenter came in to provide materials and instructions. The experimenter was not in the room during the tasks.

Stimuli for some of the group tasks were presented on a laptop computer that was placed sideways in the middle of the table, facing both the confederate and the participant (figure 1). All other tasks and questionnaires were completed via paper and pen.

A bogus heart rate monitor (figure 2) was used during the second part of the session as part of a task assigned to the participant (described later). This monitor was fabricated from old computer and electronic hardware. It had an on-off switch, adjustable knobs, a moving needle, and flashing lights, but this monitor did not measure anything. Two wires exited the top of the monitor: one ended in a USB attachment that was inserted into the laptop computer, and the second ended in a “sensor pad” and Velcro attachment that was strapped to the participant’s



*Figure 2.* Bogus heart rate monitor.

index finger. A dab of blue gel moisturizer was applied to the participant's finger before the sensor pad was attached, and the participant was told that this was "conductivity gel".

A Sony ICD-PX720 digital audio recorder was used to record the participant's rejection or corroboration of the false alibi at the end of the session.

## **Measures**

**Pre-screening personality questionnaire.** Participants answered the Ten-Item Personality Inventory (TIPI, Gosling, Rentfrow, & Swann, 2003), a short personality inventory as part of a larger online questionnaire completed at the beginning of the academic term. Participants rated their agreement that each of 10 statements corresponding to the Big Five personality traits represented their personal character, on a 7-point Likert-type scale (e.g. "Extraverted, enthusiastic", from 1 = disagree strongly to 7 = agree strongly). Participants needed to have completed this part of the questionnaire in order to be able to sign up for this study. The inventory was included to increase the believability of the cover story and personality manipulation (i.e. assignment of the participant-confederate dyad to a similar or dissimilar personality group), but the results from the questionnaire were not otherwise of interest for this study.

**Self-report trust scale.** Participants were administered the Self-report Trust Scale (SRT, MacDonald, Kessel, & Fuller, 1972) at the start of the session. The SRT was designed to measure interpersonal trust. Participants reported how much they agreed with 10 statements on a 4-point Likert scale (e.g. "I am suspicious of other people's intentions", from 1 = Often to 4 = Never). Each item was scored from 1 (low trust) to 4 (high trust), and scores for the 10 items were added to obtain a total interpersonal trust score for each participant. Thus a high score represents a high interpersonal trust level. This scale was included as an exploratory measure. It

is possible that participants high in interpersonal trust would be more willing to corroborate the confederate's false alibi because they trust that the confederate did not do anything malicious during her absence. It is also possible, on the other hand, that those high in interpersonal trust would be more likely to reject the alibi because they trust that the experimenter will not unfairly accuse the confederate.

**Lie scale.** Participants were administered the MMPI-2 Lie Scale at the start of the session. The Lie scale was originally developed to identify individuals who try to portray themselves in an unrealistically positive way, and has been shown to be adequately reliable and valid (Groth-Marnat, 2003). Participants answered 15 true-or-false items that described common human weaknesses (e.g. “Sometimes when I am not feeling well I am irritable”). The “false” responses were added to obtain a total lie scale score for each participant. A high score represents a greater attempt to appear socially desirable. It is possible that participants who score high in the Lie scale would be more likely to corroborate the confederate's false alibi in order to maintain a positive image in the eyes of the confederate. However no specific results were predicted and this scale was included primarily as an exploratory measure.

**Word-generation task.** The word-generation task was a paper and pencil task that required participants to find words in a larger letter grid. This was an 8-minute, timed task. When this task was done individually, the participant worked on her own letter grid, and when it was done collaboratively the participant and confederate worked jointly on the same letter grid. This task was not scored and was simply administered as part of the friendship manipulation.

**Friendship questionnaire.** Participants completed a friendship questionnaire that consisted of 10 questions that were meant to assess how much the participant liked the confederate and how likely she would be to engage in friend-like behaviour with the confederate

in the future (Appendix B). Participants reported how much they agreed with each statement on a 7-point Likert scale (e.g. “The other participant is friendly” and “I would go sit beside the other participant if I saw him/her in a lecture”, from 1 = completely disagree to 7 = completely agree). Items were scored from 1 to 7 and were summed to obtain a final friendship score for each participant. This questionnaire was created for this study and was used as a check for the friendship manipulation.

**Demographic questions.** Participants were asked to report their age and ethnicity. Ethnicity was then coded in terms of race (White, Black, or other) and level of cultural individualism. Cultural individualism was coded using Hofstede's individualism dimension value (IDV) index ("Geert Hofstede Cultural Dimensions", 2010; Hofstede & Bond, 1984). Ethnicities with corresponding index values of 0 to 35 were coded as primarily collectivist cultures, index values of between 35 and 55 were coded as mixed cultures, and index values of 55 to 99 were coded as primarily individualistic cultures. Participants who reported two ethnicities of opposing index values were also coded as having mixed cultural backgrounds.

**Word-scramble, image-rating, and memory tasks.** This collaborative task consisted of three parts. The stimuli for these tasks were presented on a laptop computer and the responses were collected via paper questionnaires. The word scramble task required the participant and the confederate to rearrange strings of letters to form words. The image-rating task required the participant to rate the attractiveness of images. The memory task consisted of a recognition test (old/new) for the words in the first part. These tasks were not scored and were used as filler tasks during the mock theft and the manipulation of the confederate's behaviour.

**“Follow-up” question.** A “follow-up” question was embedded at the end of a larger filler questionnaire that consisted of questions regarding the participant's experience of the word-

scramble and memory tasks. This yes/no “follow-up” question informed participants that a follow-up study to the one they had just completed was set to take place a few months later. The participant was asked if she would be willing to return to the lab to complete the follow-up study with the same “other participant” (i.e. the confederate) that she was assigned to work with in the current session (Appendix C).

**Dependent Measures.** The main dependent variable and additional dependent measures were obtained from the following measures:

*Audio-recorded responses to false alibi.* The last part of each session was audio-recorded, from the time the pair was informed of the mock theft until the participant either corroborated or rejected the false alibi. The recorded segments were transcribed and any verbal response obtained from the participant was coded. The first measure obtained was alibi corroboration, coded dichotomously as “corroborated” or “rejected”. Any response indicating that the confederate was not in the testing room the whole time was coded as a rejection. The second measure obtained was report of money, also coded dichotomously as “reported” or “not reported”. Any response from the participant indicating that the confederate was in possession of money was coded as “reported”.

*Debriefing questionnaire.* The experimenter asked each participant a series of questions during the debriefing interview (Appendix D). The experimenter asked whether the participant remembered the confederate providing the false alibi (item3), whether she saw the confederate with money (item 2), how suspicious she was, on a Likert-type scale of 1 to 10, that the confederate had stolen the money (item 1), how much she liked the confederate just before the mock theft was announced on a Likert-type scale of 1 to 7 (item 10), and a number of questions asking the participant to explain why she did or did not corroborate the alibi and why she did or

did not report the money (in the high suspicion condition; items 4 to 9). Responses to item 4 through 9 were coded for absence or presence of several response categories (e.g. "Avoiding false accusation" or "Compliance", see Appendix E for coding manual).

## **Procedures**

Participants were randomly assigned, with the use of an online random number table generator, to one of two relationship conditions: friendship (FR) or stranger (ST), and to one of two suspicion conditions: low suspicion (LS) or high suspicion (HS). We implemented a procedure that made the experimenter blind to the suspicion condition in order to prevent this knowledge from inadvertently influencing the experimenter's subsequent questioning of the participant. A lab volunteer pre-filled envelopes with either money or paper. At each session the confederate verified the current session ID number and took the contents of the corresponding envelope. When the envelope contained paper she discarded it, and when it contained money she used it for the session. The experimenter was therefore not aware of the suspicion condition until after the end of each session.

When participants signed up they read that the study examined how people with similar or dissimilar personalities performed on several cognitive tasks (Appendix A). They were informed that they would be participating with another student and that they would be completing some tasks individually and some tasks collaboratively. Participants were instructed to wait for the experimenter in the lobby of the building at the time of their scheduled session. The confederate scheduled for any given session also waited in the lobby of the building at the start of the session. When the experimenter greeted both the participant and the confederate and escorted them up to the testing room, she reiterated the study's cover story (Appendix F, script 1) and gave them consent forms (Appendix G) to read and sign. The consent also alluded to the

cover study and gave no indication of the true purpose of the study, but it did inform the participant that part of the study would be audio-recorded and that she might be asked to provide a physiological measure. No details of the purpose of the recording and physiological measure were given.

The pair was then told that they had been assigned, based on the pre-screening personality measure that they (the participant) had completed for their introductory psychology course at the start of the term, to either a “similar personalities” condition (in the FR condition) or a “different personalities” condition (in the ST condition; see Appendix F, script 2a and 2b). Consequently, a participant who perceived the confederate to be similar to her should have felt an increase in liking toward the confederate as compared to a participant who perceived the confederate to be dissimilar (Byrne, 1971; 1997). The participant and confederate were also asked to complete a second “personality check” questionnaire to confirm that their personalities were similar or dissimilar. In actuality, this questionnaire consisted of the Self-Reported Trust scale and the Lie Scale.

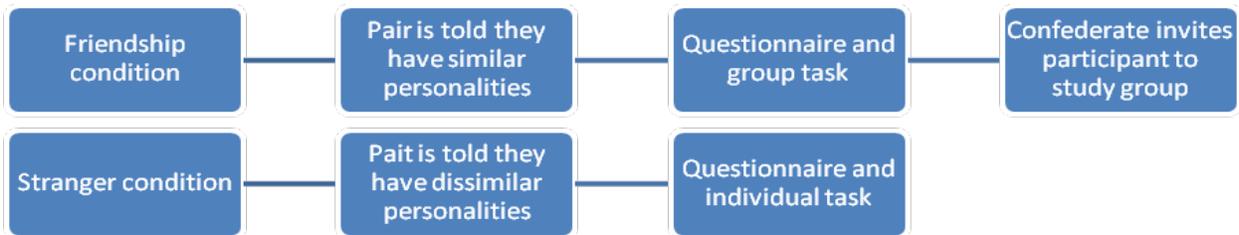
The experimenter then provided verbal instructions for five sets of tasks to be done following the personality check questionnaire (Appendix F, scripts 2a and 2b). Those in the FR condition were told that they would complete, in order, 1) a group task, 2) an individual questionnaire, 3) another group task, 4) another individual questionnaire, and 5) a final group task. Those in the ST condition were told that they would complete, in order, 1) an individual task, 2) an individual questionnaire, 3) a group task, 4) another individual questionnaire, and 5) a final group task. Therefore the only difference between the two conditions was in the first task. They completed all collaborative tasks together in the same room, and all individual tasks alone in separate rooms. The experimenter provided the necessary materials at the start of each task

but was not present during the completion of the tasks, and the door to the participant's testing room was kept shut during all tasks.

In the FR condition the first task consisted of an 8-minute collaborative word-generation task, and in the ST condition it consisted of an 8-minute individual word-generation task (Appendix F, script 3a and 3b). The interaction necessary to complete the collaborative task was expected to increase liking between the participant and the confederate in the FR condition. During this collaborative word-generation activity, the confederate was instructed to complete approximately the same number of words as the participant in case it was viewed as a competitive exercise by the participant. During this task, and in a further effort to manipulate perceived similarity and feelings of communality in the FR condition, the confederate pretended to be in the same class as the participant and invited her to take part in a study group for their upcoming exam (Appendix F, script 4a).<sup>1</sup> This was also done to create the expectation that the participant would likely see and interact with the confederate in the near future. There was no discussion of class attendance or a study group from the confederate in the ST condition. At the end of the first task the experimenter told the pair (in the FR condition) or the participant (in the ST condition) that she had scored the personality check questionnaire and that they were indeed in the right condition (i.e. that their personalities were indeed very similar or very different, in the FR and ST conditions respectively). Figure 3 provides a clear depiction of the experimental procedure for both relationship conditions up to this point.

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<sup>1</sup> In the original procedures the confederate asked the participant for her Facebook information in order to send her details and an invitation to the study group. Due to ethical concerns, this procedure was later changed to having the confederate ask the participant where she usually sits in class so that she could look out for her the following week and give her details to the study group.



*Figure 3.* Flowchart depicting the first part of the experimental procedure.

The second task consisted, in both conditions, of an individual questionnaire that included demographic questions, the friendship questionnaire, and filler questions about the participant’s experience of the word-generation task. Participants in both conditions were given the friendship questionnaire but those in the stranger condition were warned that some of these questions would seem odd, but to nevertheless answer all of them as best they could (Appendix F, script 5a and 5b).

The third task was a collaborative one. The experimenter informed the participant and confederate that she had to go pick up supplies in another building, and that she would return for the start of the fourth task (Appendix F, script 6). This was done in an attempt to ensure that the participant would believe that the experimenter would not be watching them or monitoring their actions during this task. Before leaving, the experimenter provided the instructions for the task (Appendix F, script 6): the first part consisted of a word-scramble activity, the second part was an image-rating task, and the third part was a memory task. The image-rating task required a physiological measure and required the participation of only one person. The participant was told that her consent form was randomly selected to complete this task and that for reasons of

convenience (since the experimenter would not be around at the start of this task), the measure would be recorded through the entire duration of the third task. This was done in order to later exclude the participant as a suspect in the ensuing theft. The participant's finger was then strapped to the bogus heart-rate monitor and the apparatus turned on. It was during the image-rating part of the task that the confederate left the room for three minutes, under the pretext of needing to use the washroom (Appendix F, script 7). During this time, she entered the lab office and retrieved an envelope labelled with the current session's ID number. This envelope contained either money or paper, and thus informed the confederate of the suspicion condition (high or low). In the HS condition the confederate returned to the testing room with two 20-dollar bills in her pocket. She took the money out of her pocket as she closed the door behind her, and then placed the money on the table across from the participant. She then sat down, took her wallet from her bag, unfolded the money, placed the money in her wallet and replaced her wallet in her bag. In the LS condition, the confederate returned to the room in a regular fashion without displaying any money. The confederate then completed the last part of the task with the participant.

One minute before the completion of the group task, the experimenter, wearing her coat, opened the door to the testing room and announced her return (Appendix F, script 8). At the completion of the group task, the experimenter re-entered the testing room with a digital recorder hidden under a notebook and, visibly annoyed, asked the participant and confederate if they saw or heard anyone enter the adjacent room during her absence, because some money had gone missing (Appendix F, script 9). Immediately after the experimenter's question, the confederate denied any involvement and stated that "No, we were both in here the whole time." While we anticipated that the confederate's false alibi would make her appear somewhat guilty in both

suspicion conditions, we expected that she would appear even guiltier in the high suspicion condition when seen in possession of money. The experimenter sighed to the confederate's denial, told them that she would have to deal with the theft after the session and then proceeded to their next task. If the participant asked any questions about the missing money, she was told that it was money from an envelope that was to be used to pay other research participants. The experimenter then split the pair and led the confederate to the other room for the fourth, individual, task, while the participant remained in the main testing room. During this task, which consisted of the post-study questionnaire that included filler questions and the follow-up question, the experimenter approached the participant and told her that she knew that she had not left the room since a continuous physiological measure was recorded, but asked if the confederate remained in the room for the entire duration of the task (Appendix F, script 9). The participant's response (i.e. corroboration or rejection) was captured by the concealed digital audio recorder. Figure 4 provides a clear depiction of the experimental procedure for both relationship conditions for the second part of the experiment. The initial instructions given to the participant included a final collaborative task, but no such task existed. It was mentioned only to create an expectation that the participant and confederate would have to work together again following the alibi-corroboration question. This was done in an attempt to better mimic actual cases in which a witness is questioned about a suspect's alibi. It is reasonable to assume that this individual would expect to see and interact with the suspect following an interview with police, especially if the suspect is a friend or family member, and that this expectation may influence the witness' report. The participant was then debriefed, probed for suspicion, and given a debriefing form immediately after the fourth task (Appendix H and I).

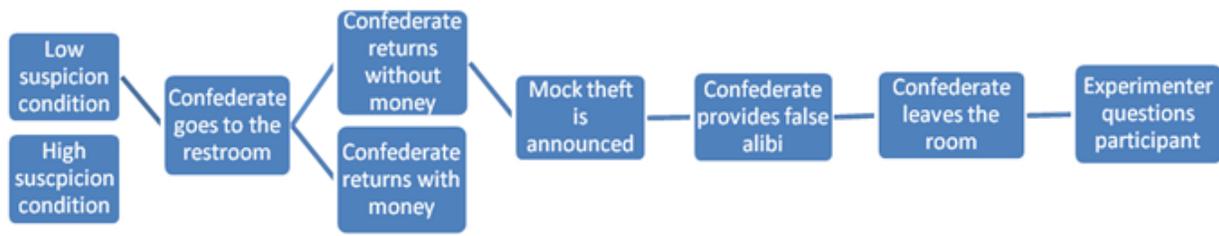


Figure 4. Flowchart depicting the second part of the experimental procedure.

## Results

### Friendship Manipulation

The friendship questionnaire was used to assess how close participants felt to the confederate following the friendship manipulation. Using data from the present sample, the reliability (internal consistency) of the full 10-item scale, as measured by Cronbach's alpha coefficient, was computed at .93. All items had corrected item-total correlations greater than .3, indicating an internally reliable measure (Nunnally, 1978), and all items were therefore included in the friendship score for subsequent analyses.

The mean friendship score across all participants was 58.72 ( $SD = 7.58$ ), and scores ranged from 37 to 70, out of a possible maximum score of 70. A 2(relationship condition)  $\times$  2(suspicion level) ANOVA of participants' total friendship scores revealed a main effect of relationship condition,  $F(1, 77) = 98.13, p < .001, \eta^2 = .56$ . Participants in the friendship condition had significantly higher friendship scores ( $M = 58.72, SD = 7.58$ ) than participants in the stranger condition ( $M = 38.26, SD = 10.57$ ). There was no main effect of suspicion level ( $p = .24$ ) and no significant interaction ( $p = .90$ ).

We also conducted a 2(relationship condition)  $\times$  5(confederate) ANOVA of participants' total friendship scores to examine whether there was an effect based on the confederate present during a session (five different confederates were used in this study). The main effect of confederate approached significance ( $p = .052$ ), however the sample was distributed very unequally among confederates ( $n$ s ranged from 7 to 27) thus rendering the obtained effects no longer independent of one another and increasing the risk of a Type I error. More importantly, however, there was no significant interaction between relationship condition and confederate

( $p = .19$ ). We can therefore be confident that all confederates were liked to a greater extent in the friendship condition than in the stranger condition.

A second, single-item measure of liking of the confederate (measured on a 7-point Likert scale) was obtained during debriefing to examine any changes in liking since completion of the friendship questionnaire due to interaction in the second part of the experiment. A 2(relationship condition)  $\times$  2(suspicion condition) ANOVA of this liking score also revealed a significant main effect of relationship condition,  $F(1, 49) = 5.44$ ,  $p = .02$ ,  $\eta^2 = .10$  ( $M_{FR} = 5.91$ ,  $SD_{FR} = 0.93$ ;  $M_{ST} = 5.24$ ,  $SD_{ST} = 1.20$ ), no significant main effect of suspicion level ( $p = .35$ ) and no significant interaction ( $p = .56$ ). This second rating of liking was significantly lower than the identical item from the friendship questionnaire for participants in the friendship condition (mean difference = -0.34 (0.87),  $t(27) = 2.06$ ,  $p = .049$ ,  $d = -0.39$ ), and was significantly higher for participants in the stranger condition (mean difference = 1.00 (1.70),  $t(24) = -2.95$ ,  $p = .01$ ,  $d = 0.59$ ), suggesting a regression toward the mean on the second measure of liking.

### **Manipulation of Confederate's Suspiciousness**

At debriefing, we asked participants in the high suspicion condition whether or not they had seen the confederate re-enter the room with money. Twenty-six out of 38 participant (68.4%) reported that they had seen the money, and the remaining 12 (31.6%) reported that they had not.

All participants were also asked at debriefing how suspicious they had been, on a scale of 1 to 10, that the confederate had stolen the money. Participants in the high suspicion condition reported being more suspicious,  $M = 4.88$  (2.97), than participants in the low suspicion condition,  $M = 4.00$  (2.62), however a 2(relationship condition)  $\times$  2(suspicion level) ANOVA on suspicion rating produced neither a significant main effect nor interaction,  $ps > .24$ . We then

repeated this analysis but excluded the 12 participants in the high suspicion condition who reported not having seen the money. A 2(relationship condition)  $\times$  2(suspicion level) ANOVA on suspicion rating this time revealed a significant main effect of suspicion level,  $F(1, 47) = 6.78, p = .01, \eta^2 = .13$  (means: LS = 4.00 (2.62); HS = 5.83 (2.83)), but again no main effect of relationship condition and no interaction,  $ps > .24$ .

A comparison of suspicion ratings of participants who reported seeing the money and those who reported not seeing the money (but who were in the high suspicion condition) revealed that the former group were more suspicious of the confederate,  $M = 5.83$  (2.83), than the latter group,  $M = 2.78$  (2.17),  $t(27) = 2.86, p = .01, d = 3.17$ . Interestingly, participants who reported not having seen the money in the high suspicion condition gave lower suspicion ratings than participants in the low suspicion condition,  $M = 4.00$  (2.62), although this difference was not significant,  $t(38) = 1.28, p = .21, d = 1.42$ .

We also conducted a 2(suspicion level)  $\times$  5(confederate) ANOVA on suspicion rating to examine whether any of the confederates were perceived as more suspicious than others. No significant main effect or interaction was found,  $ps > .23$ .

## **Main Analyses**

**Alibi corroboration.** Nineteen out of 81 participants (or 23.5%) corroborated the confederate's alibi. Of those who rejected the alibi, most (54 out of 62) did so after being questioned by the experimenter. Of the remaining 8 participants, 2 rejected the alibi by immediately "reminding" the confederate that she had left, and 6 rejected the alibi by informing the experimenter that the confederate had left before the experimenter questioned them.

A chi-square test of the relationship between relationship condition and participants' decision to corroborate or reject the alibi was not significant,  $p = .94$ . Thus, Hypothesis 1 was not supported; participants in the stranger condition corroborated the confederate's alibi in 23.8% of cases and participants in the friendship condition corroborated the alibi in 23.1% of the time (Table 1). To further explore the possible association between relationship and corroboration, a point-biserial correlation between friendship score and corroboration decision was computed. There was virtually no relationship between the two variables,  $r_{pb} = .08$ ,  $p = .27$ .

A chi-square test of the relationship between suspicion level and participant's corroboration decision was significant,  $\chi^2(1, N = 81) = 7.30$ ,  $p = .01$ ,  $\phi = -0.30$ . Participants in the low suspicion condition corroborated the confederate's alibi in 35.7% of cases (15 out of 42) whereas participants in the high suspicion condition corroborated the alibi in 10.3% of the time (4 out of 39 cases). Thus, Hypothesis 2 was supported; the odds that participants in the low suspicion condition corroborated the confederate's alibi were 4.86 times larger than the odds that participants in the high suspicion condition corroborated the alibi (Figure 5). A chi-square analysis excluding cases in which participants in the high suspicion condition reported not having seen the money also yielded a significant result,  $\chi^2(1, N = 69) = 7.09$ ,  $p = .01$ ,  $\phi = -0.32$ .

Hierarchical log-linear analysis revealed that there was no significant interaction between relationship condition and suspicion level in relation to participants' corroboration decision,  $p = .25$ . A hierarchical log-linear analysis excluding cases in which participants in the high suspicion condition reported not having seen the money also yielded a non-significant interaction,  $p = .64$ . Thus, Hypothesis 3 was not supported.

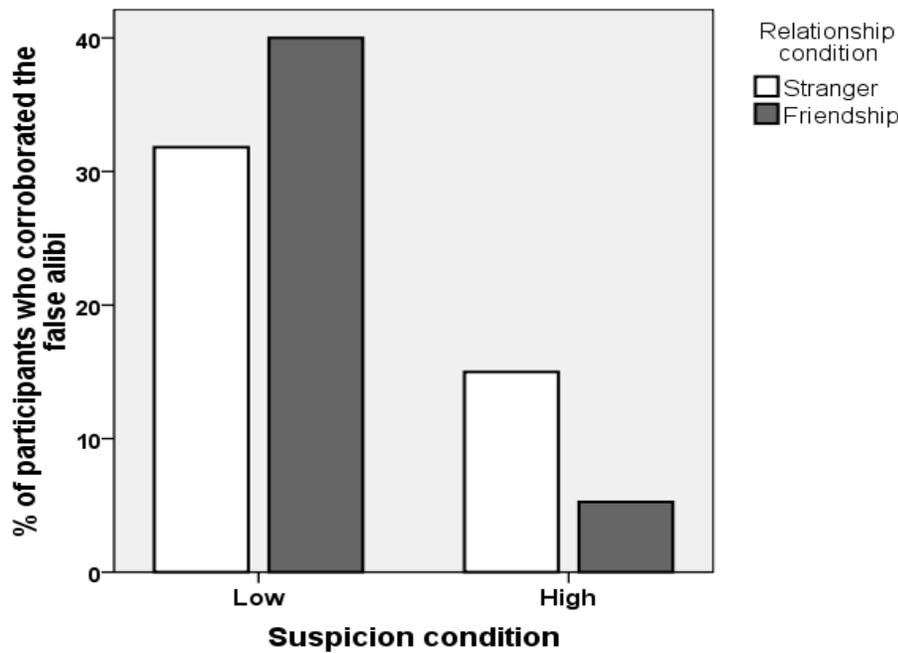


Figure 5. Percentage of participants who corroborated the confederate's false alibi by suspicion and relationship conditions

**Report of money.** Out of the 35 participants in the high suspicion condition who did not corroborate the confederate's alibi, 7 (or 20%) reported to the experimenter that they saw the confederate in possession of money. To examine the possible association between relationship and reporting, a point-biserial correlation was computed between friendship scores and participants' decision to report the money. The two variables were not significantly correlated,  $r_{pb} = -.11, p = .26$ .

Table 1.

*Corroboration by Relationship Condition and Suspicion Level*

		Participant does not corroborate alibi		Participant corroborates alibi		Total	
		N	%	N	%	N	%
Stranger condition	Low suspicion condition	15	68.2	7	31.8	22	100
	High suspicion condition	17	85.0	3	15.0	20	100
	Total	32	76.2	10	23.8	42	100
Friendship condition	Low suspicion condition	12	60.0	8	40	20	100
	High suspicion condition	18	94.7	1	5.3	19	100
	Total	30	76.9	9	23.1	39	100
Total	Low suspicion condition	27	64.3	15	35.7	42	100
	High suspicion condition	35	89.7	4	10.3	39	100
	Total	62	76.5	19	23.5	81	100

**Exploratory Analyses**

**Self-reported interpersonal trust.** The mean SRT score across all participants was 27.79 (3.57) and ranged from 18 to 35, out of a possible maximum of 40. SRT scores were not correlated with friendship scores,  $r_s = .10$ ,  $p = .45$ . To explore the possible relationship between interpersonal trust and corroboration, a point-biserial correlation between SRT scores and participants' corroboration decision was computed, but it was not significant,  $r_{pb} = .008$ ,  $p = .94$ . A point-biserial correlation was also computed between SRT scores and participants' decision to report the money, and again yielded a non-significant result,  $r_{pb} = .01$ ,  $p = .94$ .

**Lie scale.** The mean lie scale score across all participants was 3.90 (2.08) and scores ranged from 0 to 8, out of a possible maximum of 15. Lie scale scores were not correlated with friendship scores,  $r_s = -.02, p = .89$ . To explore the possible relationship between social desirability and corroboration, we computed a point-biserial correlation between scores on the lie scale and participants' corroboration decision. No significant association was found,  $r_{pb} = -.09, p = .44$ . We also computed a point-biserial correlation between scores on the lie scale and participants' decision to report the money, and found no significant correlation,  $r_{pb} = -.09, p = .58$ .

**Willingness to return for second session.** Sixty-six percent of participants who did not corroborate the confederate's alibi responded that they would be willing to return to the lab to work with the confederate in a future study, and 58% of participants who corroborated the confederate's alibi responded that they would return. A chi-square test of the relationship between participants' corroboration decision and their willingness to return was not significant,  $p = .51$ . A point-biserial correlation between friendship scores and participants' willingness to return revealed a marginally significant correlation,  $r_{pb} = -.22, p = .050$ . A higher friendship score was associated with a greater likelihood to be willing to return to work with the confederate in a future study.

**Explanations for alibi corroboration or rejection.** During the debriefing interview, and after they were informed of the purpose of the study, participants were asked to explain why they corroborated or rejected the confederate's alibi. (These interview questions were introduced after the third participants, therefore only 78 out of 81 participants were asked these questions.) Of the 59 participant who rejected the alibi, 34 stated that they did so because they believed it was the right thing to do ('Morality-based response', see Appendix E for category descriptions),

20 stated that they rejected the alibi because they trusted that the confederate had not stolen the money and had simply left to use the restroom ('Trust in confederate'), 20 stated that they felt bad that the experimenter lost money ('Empathy toward experimenter'), 13 stated that they didn't think using the restroom was a significant event that needed to be concealed ('Irrelevance'), and 12 stated that they simply responded to the experimenter's question ('Compliance'). Among the 19 participants who corroborated the alibi, the most common responses were that they did so because they trusted that the confederate had not stolen the money ('Trust in confederate', reported in 10 of 19 cases), that they corroborated the alibi because they had been caught off guard by the experimenter's question ('Caught off guard', in 8 cases), that they forgot that the confederate had ever left the room ('Memory lapse', in 7 cases), and that they did not think that going to the restroom was a significant event that needed to be reported ('Irrelevance', in 5 cases). See table 2 for a complete summary of all responses.

**Explanations for reporting or omitting money.** During the debriefing interview participants in the high suspicion condition were also asked to explain why they did or did not report to the experimenter that the confederate had money. Of the 32 participants who did not report the money, 12 stated that they believed the money belonged to the confederate ('Ownership belief'), 11 reported that they did not see the money ('Lack of awareness'), 5 stated that they did not want to risk falsely accusing the confederate ('Avoiding false accusation'), 4 stated that they thought a different object (albeit related, e.g. wallet, purse) had gone missing ('Unclear missing item'), and 2 stated that they did not think it was stolen money ('Trust in confederate'). Of the 6 participants who reported the money (the 7th participant who reported the money was not interviewed), 3 reported that they did so because they felt bad for the experimenter ('Empathy toward experimenter'). See table 2 for a breakdown of all responses.

Table 2.

*Participants' explanations for rejection and corroboration of the alibi and for report and non-report of the money*

Response categories	Participants who rejected the alibi (n = 59)					Participants who corroborated the alibi (n = 19)					Total
	Relationship condition		Suspicion condition		Total	Relationship condition		Suspicion condition		Total	
	ST (n = 30)	FR (n = 29)	LS (n = 25)	HS (n = 34)		ST (n = 10)	FR (n = 9)	LS (n = 15)	HS (n = 4)		
<i>Relevant to alibi</i>											(N = 78)
Morality-based response	20	14	13	21	34	0	1	1	0	1	35
Trust in confederate	10	10	11	9	20	5	5	9	1	10	30
Empathy toward experimenter	8	12	7	13	20	--	--	--	--	--	20
Irrelevance	7	6	4	9	13	2	3	5	0	5	18
Compliance	7	5	2	10	12	0	0	0	0	0	12
Caught off guard	--	--	--	--	--	3	5	6	2	8	8
Memory lapse	--	--	--	--	--	6	1	6	1	7	7
Avoiding confrontation	--	--	--	--	--	1	3	3	1	4	4
Avoiding false accusation	--	--	--	--	--	1	1	2	0	2	2
Preservation of trust	--	--	--	--	--	0	1	1	0	1	1
<i>Relevant to money</i>											(n = 38)
Ownership belief	5	6	--	11	11	--	--	--	1	--	12
Lack of awareness	4	5	--	9	9	--	--	--	2	--	11
Avoiding false accusation	1	4	--	5	5	--	--	--	0	--	5
Unclear missing item	2	1	--	3	3	--	--	--	1	--	4
Trust in confederate	2	0	--	2	2	--	--	--	0	--	2
Empathy toward experimenter (when reported)	3	0	--	3	3	--	--	--	--	--	3
<i>General responses</i>											(N = 78)
Concern for future interaction	2	2	1	3	4	0	0	0	0	0	4
Remorse	1	3	3	1	4	1	1	1	1	2	6
Fear of blame	2	4	1	5	6	1	0	1	0	1	7

**Culture.** Two raters independently coded participants' ethnicity responses in terms of individualism and collectivism according to Hofstede's cultural dimension of individualism ("Geert Hofstede Cultural Dimensions", 2010), and then conferred to resolve any discrepancies. Moderate inter-rater reliability was reached,  $\kappa = 0.50$  (Landis & Koch, 1977). Twenty-eight percent of participants were identified as having a primarily collectivist cultural background, 9% as having a primarily individualistic cultural background, and 25% as having both collectivistic and individualistic cultural backgrounds. Cultural background was impossible to code in the remaining 38% of participants due to missing or ambiguous ethnicity responses. Thirty-nine percent of participants with collectivistic cultural backgrounds, 25% of participants from mixed cultural backgrounds, and 14% of participants from individualistic cultural background corroborated the confederate's alibi. Additionally, in the high suspicion condition, and of those who did not corroborate, 14% of participants with collectivistic cultural backgrounds, 10% of participants with mixed cultural backgrounds, and 25% of participants with individualistic cultural backgrounds decided to report the money. Due to low expected cell counts, we were unable to compute meaningful chi-square analyses to test the significance of the relationship between cultural dimension and corroboration, and between cultural dimension and participants' decision to report the money.

**Race.** Two raters independently coded ethnicity responses in terms of race of the participants and then conferred to resolve any discrepancies. Outstanding inter-rater reliability was reached,  $\kappa = 0.87$  (Landis & Koch, 1977). Forty-two percent of participants were White, 11% were Black, and 43% were of another or mixed race. The race of the remaining 4% of participants was unknown. Fifteen percent of White participants, 22% of Black participants, and 34% of participants of other or mixed race corroborated the confederate's alibi. Additionally, in

the high suspicion condition, and of those who did not corroborate, 29% of White participants, 25% of Black participants, and 0% of participants of other of mixed race decided to report the money. Due to low expected cell counts, we were unable to compute meaningful chi-square analyses to test the significance of the relationship between race and corroboration, and between race and participants' decision to report the money.

Of the five confederates who took part in this study, four were White and one was Black. In 32% of cases, the participant and the confederate were of the same race, and in 64% of cases they were of different races (the remaining 4% of participants did not report race). Twelve percent of participants who were of the same race as the confederate, and 31% of participants who were of a different race than the confederate corroborated the confederate's alibi (see Table 2). A chi-square test of the relationship between race similarity and participants' corroboration decision approached significance,  $\chi^2(1, N = 78) = 3.48, p = .06, \phi = .21$ . Participants who were of a different race than the confederate were 2.6 times more likely to corroborate her false alibi than participants who were of the same race. Additionally, in the high suspicion condition, and of those who did not corroborate, 29% of participants who were of the same race as the confederate, and 10% of the participants who were of a different race, decided to report the money. Due to low expected cell counts we were unable to compute a meaningful chi-square analysis to test the significance of the relationship between race similarity and participants' decision to report the money.

Table 3.

*Corroboration by Racial Similarity Between Participant and Confederate*

		Race of participant	Participant does not corroborate alibi		Participant corroborates alibi		Total	
			N	%	N	%	N	%
Races of participant and confederate	Same	White	21	91.3	2	8.7	23	100
		Black	2	66.7	1	33.3	3	100
		Total	23	88.5	3	11.5	26	100
	Different	White	8	72.7	3	27.3	11	100
		Black	5	83.3	1	16.7	6	100
		Other	23	65.7	12	34.3	35	100
		Total	36	69.2	16	30.8	52	100

## Discussion

Contrary to our predictions, manipulating the degree to which participants liked a confederate had no significant effect on their decision to either corroborate or reject the latter's false alibi. Manipulating the suspiciousness of the confederate's behaviour, on the other hand, did have an effect on participants' decisions to either corroborate or reject the false alibi. Participants who saw the confederate in possession of money were significantly more likely to later reject her false alibi than participants who did not see the confederate with money, and this effect did not depend on how much the participant liked the confederate. Also, participants' liking of the confederate was not at all associated with whether they decided to spontaneously report to the experimenter information that was relevant to the situation but that they were not directly asked about (i.e. that the participant came back with money). In addition to examining the effects of the independent variables, supplementary analyses were done to see if certain personality characteristics were associated with participants' decisions to corroborate the false alibi and to report the confederate's suspicious behaviour. The likelihood that a participant corroborated the alibi or reported the suspicious behaviour was related to neither her level of interpersonal trust nor her level of social desirability. Certain demographic characteristics were also examined. There were some trends in the data that may suggest that participants with highly collectivistic cultural backgrounds were more likely to corroborate the confederate's false alibi and less likely to report the confederate's suspicious behaviour to the experimenter than participants with highly individualistic cultural background, although meaningful interpretation of this trend is difficult due to limited data on participants' cultural backgrounds and affiliations. There was also a weak association between the racial similarity of the participant-confederate pair and the likelihood to corroborate, where participants who were of the same race as the

confederate were somewhat less likely to corroborate the false alibi. Finally, there was a tendency for participants who were of the same race as the confederate to be more likely to report suspicious behaviour to the experimenter than participants who were of a different race as the confederate.

### **Friendship and Alibi Corroboration**

Our initial hypothesis was that participants in the friendship condition would be more likely to corroborate the confederate's false alibi than participants in the stranger condition. However, despite the apparent success of the friendship manipulation, the results did not support this hypothesis. Participants in the friendship condition were as likely as participants in the stranger condition to corroborate the confederate's false alibi. Even when the scores from the friendship questionnaire were used as a measure of closeness instead of relationship condition assignment, no hint of a correlation was found between friendship scores and alibi corroboration or rejection. These results suggest that friends may not be more likely to lie for one another than are strangers. This was quite unexpected given the findings from the literature on alibi evaluation and generation that individuals not only believe that those who share a close relationship are more willing to lie for one another (Culhane & Hosch, 2004; Hosch et al., in press; Olson & Wells, 2004), but also claim that they would themselves be more likely to lie for a close other than for a stranger (Hosch et al., in press). It is of course possible that the level of friendship required for individuals to be motivated to lie for one another over and beyond their willingness to lie for a stranger was not achieved by the friendship manipulation used in this study. The characteristics of a real and longstanding friendship are probably quite different from those of an emerging friendship between two students meeting in the context of a course-required activity. Nevertheless, we believe that a genuine difference in affinity between the

participant-confederate pair existed between the two experimental groups. The types of manipulations used, such as increased interaction and increased perceived similarity have previously been shown to be effective means of increasing liking between two individuals (e.g. Burger et al., 2001). In addition, we also created an expectation of future interaction (in the context of a study group with other fellow students) between the participant and confederate in the friendship condition, which should have increased both the feeling of communality between the pair and the likelihood of altruistic behaviour (Clark et al., 1987). These manipulations in the present study had a very large effect on participants' friendship questionnaire scores, suggesting at least a situation akin to an emerging friendship within pairs in this condition.

Another possibility for the lack of a main effect of relationship condition is that participants in both groups had attained a similar level of liking and perceived closeness toward the confederate by the time in the session at which they were asked to corroborate or reject the alibi. That is, because the friendship questionnaire used to verify the success of the relationship manipulation was completed by participants before their last task, it is possible that the interaction involved in this final task increased participants' liking of the confederate in the stranger condition such that any previous meaningful difference in liking between the two groups was obliterated. However when participants were asked during the debriefing session to rate how much they had liked the confederate after the last group task, there was again a moderate effect of relationship condition, where participants in the friendship condition gave higher liking ratings than participants in the stranger condition. This suggests that the effects of the friendship manipulations lasted beyond the last interactive part of the study. The effect was not as strong for this second measure of liking as the effect obtained on the friendship questionnaire,

but this can be attributed, at least in part, to the fact that participants were now aware of the confederate's identity and true role in the study.

Even if the level of closeness obtained in the friendship condition cannot be compared to that of true friends, even a slight increase in social relatedness between the participant-confederate pairs in the friendship condition compared to the pairs in the stranger condition was expected to produce differences in likelihood to corroborate the confederate's false alibi. According to the literature on alibi evaluation and generation, individuals still expect and report differences in false alibi corroboration between strangers and people who share distant social relationships. For example, participants in Hosch et al.'s (in press) study reported believing that complete strangers would lie for one another only 6% of the time, compared to 15% of the time for familiar strangers and 31% of the time for co-workers. They also reported that they themselves would be willing to lie for a stranger only 3% of the time, compared to 9% of the time for familiar strangers and 22% of the time for co-workers. At a minimum, the participant-confederate pairs in the friendship condition in this study can be regarded as familiar strangers or co-workers (i.e. fellow students taking the same class). Yet 23% of participants in both relationship conditions corroborated the confederate's false alibi. In light of the figures reported in Hosch et al. (in press), perhaps a better conclusion for the results obtained in this study is that strangers are *not less likely* to lie for one another than are friends (or co-workers. etc). If this is in fact the case, perhaps lay people and investigators' general trust in strangers' statements should be as much of a concern as their general distrust in statements from close others.

### **Suspicious Behaviour and Alibi Corroboration**

We had hypothesized that participants in the high suspicion condition would be less likely to corroborate the confederate's false alibi than participants in the low suspicion condition.

This prediction was supported by the data: when the confederate was in possession of money around the time of the supposed theft, participants were almost five times less likely to corroborate the false alibi than when the confederate did not have any money. This suggests that when there is evidence pointing to the likely guilt of an individual, others may be more suspicious of that person and thus less willing to lie for that person than when the evidence is more ambiguous. This conclusion is supported by the finding that participants in the high suspicion condition who acknowledged seeing the confederate with money reported being significantly more suspicious that the confederate was guilty than participants in the low suspicion condition. When the confederate went to the restroom and promptly came back and completed her task, participants may have perceived this brief absence as quite innocuous. The confederate's claim that she had remained in the testing room throughout the whole session may have aroused some suspicion from the participants, but this "evidence" was likely interpreted as ambiguous. We suspect that participants in this condition may have been less likely to feel it was necessary or even favourable to inform the experimenter of the confederate's absence and therefore were more likely to corroborate the false alibi. When the confederate went to the restroom and came back with money in her pocket, on the other hand, participants likely perceived this situation as peculiar at first, and then as highly suspicious after learning of the money theft and hearing the confederate's false claim that she was in the testing room during the entire session. We suspect that participants in this condition were more likely to deem it important to inform the experimenter of the confederate's absence, and therefore were more likely to reject the false alibi and instead report the truth. These speculations are supported by the explanations provided by the participants for their behaviour. Of the 10 participants who stated that they corroborated the alibi because they trusted that the confederate had not stolen the

money, 9 were in the low suspicion condition. Also, all 5 participants who stated that they corroborated the alibi because they did not think that going to the restroom was a significant event worth reporting were in the low suspicion condition.

We had predicted that participants in the low suspicion condition would be more likely to corroborate the confederate's false alibi. What we had not predicted, however, was that so few participants would report to the experimenter that they had seen the confederate with money. Of the 35 participants in the high suspicion condition who rejected the false alibi, only 7 (or 20%) reported to the experimenter that they had seen the confederate with money. Therefore although most were willing to report to the experimenter the confederate's absence when they were asked, very few participants were willing to offer additional information, information that was surely relevant but also potentially incriminating. When these participants were asked during the debriefing interview why they had not reported the money, common responses were that they believed the money belonged to the confederate, that they did not notice the money, and that they thought the experimenter said that something else went missing (but interestingly enough these participants reported hearing something related to money, such as a wallet or a purse). All these responses make the confederate's behaviour appear normal and make the participant's lack of intervention appear appropriate, absolving them of any responsibility to report the behaviour. These explanations are reminiscent of explanations given by non-intervening participants in Darley and Latané's (1968) classic studies on bystander intervention, who reported that they were not aware of the emergency situation or did not perceive the situation as an emergency and therefore did not feel compelled to intervene. Darley and Latané suggested that these types of responses may be due to participants' effort to maintain a socially desirable image.

Although it is possible that the 12 participants in the high suspicion condition who reported not seeing the money were so focused on their task that they did not notice it, we believe that this is very unlikely. The tasks that the participants were doing when the confederate came back in the testing room consisted of rating images on one dimension, at a rate of one image per 15 seconds. The confederate placed the money on the table approximately two feet away from the screen on which the images appeared and directly in front of the confederate. The money was in plain view of the participant while the confederate rummaged through her bag, took out her wallet, unfolded the money, and put it in her wallet. We believe instead that these participants' denial reflected a self-serving function in response to their failure to report the confederate's absence (2 of the 12 participants) and/or their failure to report seeing the confederate with money (all of the 12 participants). Participants were asked if they saw the money after the purpose of the study had been explained to them and therefore after they realized that the experimenter would be aware of their decision not to report potentially incriminating information. It is therefore possible that participants said that they did not see the money in order to render their inactions socially desirable. Further support for this argument comes from participants' ratings of their suspiciousness that the confederate was guilty of stealing the money, which was also obtained during debriefing. The average suspicion rating given by participants in the high suspicion condition who claimed not to have seen the money was lower than the average rating given by participants who reported that they saw the money, but even lower still than the average suspicion rating given by participants in the low suspicion condition. Both effects were quite large, although the latter group comparison was not statistically significant, probably due to the low number of participants who reported not seeing the money. These twelve participants claimed to have been exposed to the same level of evidence against the confederate as those in

the low suspicion condition (i.e. exposed to the false alibi only) yet reported being much less suspicious of the confederate's guilt. In line with Darley and Latané's (1968) reaction to the explanations provided by non-intervening participants, our suspicions are therefore that participants were not genuine in their responses to the experimenter during the debriefing in order to maintain a favourable image. Perhaps the fact that participants were debriefed by the same experimenter who ran the study (and who was the supposed victim of the theft) pressured some participants to provide self-serving responses. Future studies using this paradigm should consider having a different person debrief participants.

Let's revisit the example scenario given in the introduction of the mother who is asked to corroborate her son's claim that he had been home with her all day when in fact he had briefly gone out jogging. According to the results obtained in this study, this mother may in fact be more likely to falsely say that her son was home all day if she doesn't have any real suspicions that her son was up to no good while out jogging. However, if she does have some suspicions that her son might be guilty, she may be more likely to disclose to the police that her son was briefly absent but not very likely to disclose the nature or reason for her suspicions, or even that she is suspicious at all. In fact, this may be true of any alibi witness, regardless of their relationship with the suspect. This could have implications for the way in which investigators interview alibi witnesses and what kind of information they should and should not expect witnesses to offer. At the very least, the effect of suspiciousness on participants' willingness to corroborate a false alibi obtained in this study emphasizes the importance of taking into account perceived suspiciousness or level of evidence against a suspect in future studies on alibi evaluation and generation.

## Personality Measures

Measures of interpersonal trust and social desirability were included in this study as exploratory measures. We found no relationship between interpersonal trust and; (1) friendship scores, (2) the decision to corroborate or reject the false alibi, or (3) the decision to report the money or not. Participants high in interpersonal trust were not more likely to corroborate the confederate's false alibi nor to report the money than those low in interpersonal trust, regardless of suspicion condition. There was also no relationship between these latter three measures and the measure of social desirability.

This lack of findings is not surprising from the point of view of the psychological literature on bystander intervention. Insofar as the rejection of an alibi that is known to be false can be thought of in terms of a bystander intervention (i.e. where an otherwise uninvolved witness intervenes in an emergency situation), research by Darley and Latané (1968) would suggest that the behaviour is not related to many personality characteristics, including social desirability. Psychological research on lying, on the other hand, suggests that frequent liars are highly manipulative, concerned with impression management, and more sociable than infrequent liars, and that people who tell the least lies are high in social desirability and have high-quality relationships with members of the same-sex (Kashy & DePaulo, 1996). It is also suggested that those with higher-quality same-sex relationships tell more altruistic lies (i.e. lying for the purpose of benefiting others) as opposed to self-centred lies than those with poorer-quality same-sex relationships. However, alibi corroboration and in particular corroboration of an alibi that is known to be false, cannot adequately be explained in terms of either bystander intervention or general lying. The literature on bystander intervention is typically interested in intervention in the presence of others. A scenario in which multiple possible alibi witnesses are present is not

impossible, but in such a case all witnesses would likely be interviewed separately and personally called-upon to provide witness statements, without having co-witnesses present to directly influence their response. Also, most of the literature on lying has looked at everyday lies ranging from relatively unimportant matters to more consequential lies, and has not adequately differentiated between altruistic lies told *to* others versus altruistic lies told *about* others. Nevertheless, alibi corroboration behaviour could be studied from the perspective of these two lines of research in future studies in order to better link this behaviour to other well-established basic social psychological theories. For example future studies could look more closely at possible differences in manipulateness and quality of social relationships between those who chose to corroborate a false alibi and those who do not.

### **Race and Culture**

By coding participants' self-reported ethnicity into collectivistic, individualistic, and mixed cultures, we found a tendency for participants with more collectivistic cultural backgrounds to be most likely to corroborate the confederate's false alibi and for participants with more individualistic cultural backgrounds to be least likely to do so. There was also a trend among those in the high suspicion condition who rejected the false alibi such that participants with more individualistic cultural backgrounds were most likely to report seeing the confederate with money. This data supports the idea suggested by Culhane et al. (2008) that people from collectivistic cultures may be more likely to lie for close others than people with individualistic cultural backgrounds due to the greater general reliance on and responsibility toward family and community in collectivistic cultures. In their survey study described earlier, Culhane et al. found that Hispanic participants were more likely to rely on family members to provide them with false alibi corroboration in the event that they became a suspect of a crime than were White

participants. Although the significance of the trends in the present study could not be assessed because cultural background could not be coded for all participants, which left us with even fewer participants who corroborated the alibi or reported the money, these trends make cultural dimensions a worthwhile candidate for further study.

Race was also coded from participants' self-reported ethnicity. Race was only coded as either matching the race of the confederate or not, and therefore racial categories used were Black, White, and other. There was a tendency for White participants to be least likely to corroborate the false alibi, followed by Black participants, and participants of other races being most likely to corroborate. There was also a trend for White and Black participants to be more likely to report the money than participants of other races. The statistical significance of these trends again could not be established due to low number of participants in certain categories. The racial trends observed, however, may be a reflection of cultural differences, and specifically of differences in cultural dimensions of individualism and collectivism. Most cultures comprised of primarily Caucasian members are individualist cultures as per Hofstede's measure, and most other cultures comprised primarily of non-White and non-Black individuals are collectivist cultures. Because more participants could be coded into a racial category than into a cultural category, it is possible that race as coded in this sample is a better measure of individualism and collectivism than cultural background. Of course, these crude measures of race, individualism and collectivism based on ethnicity do not take into account how long participants have lived in Canada, a rather highly collectivistic culture itself. It is possible that Hofstede's measure is less diagnostic or simply not appropriate for multi-generation immigrants. Nevertheless, these trends again highlight the potential value of cultural dimension as a study variable in alibi corroboration

research, and the importance of including adequate measures of cultural identity in future studies.

Another non-significant trend observed is that participants who were of a race different from that of the confederate were over three times more likely to corroborate her false alibi than participants who were of the same race as the confederate. Of those in the high suspicion condition, there was also a trend for participants of the same race as the confederate to be more likely to report the money to the experimenter. These trends were quite unexpected, as one would expect individuals to be more likely to behave altruistically toward others who are most similar to them or who belong to the same cultural or social group (e.g. Trivers, 1971). However a closer examination of the data reveals that this trend is mostly driven by a higher likelihood of White participants to corroborate a Black confederate's false alibi. One possible explanation for this is that participants exhibited some kind of stereotype reactance (Kray, Thompson, & Galinsky, 2001): perhaps because the confederate was implicitly being accused or suspected of having committed the crime, a racial stereotype associating Black people to criminal activity was activated, which then caused participants to act in a way that is inconsistent with the stereotype (i.e. by suggesting to the experimenter that the confederate is in fact innocent). This explanation is of course mere speculation and additional investigation would be needed to support this idea.

### **Limitations and Future Directions**

The purpose of this study was to investigate whether an alibi witness who is the friend of a suspect would be more likely to corroborate the suspect's false alibi than would an alibi witness who does not know the suspect. This is the first attempt to study such behaviour, and we acknowledge that the generalizability of our results is limited. First, the potential consequences of corroborating the confederate's false alibi in this study were likely not perceived to be very

serious in comparison to the potential repercussions of lying to the police during a real interview. Presumably, actual alibi witnesses who are being interviewed would be under much more stress and would be conscious of the fact that the police could investigate the veracity of their statements, which could affect witnesses' decisions to be truthful or deceitful. The mere presence of an official authority figure (as opposed to a student experimenter) may decrease the likelihood that a witness will lie. Additionally, the type of crime may influence a witness's willingness to lie for another person. Most crimes depicted in other studies of alibi evaluation have been violent crimes against a person, whereas the crime in this study (stealing money) was comparatively less serious in nature. It is possible that these less serious crimes elicit a relatively high rate of false corroboration, but it is also possible that crimes of a violent nature would elicit high rates of false corroboration due to witnesses' fear of the offender. Another limitation of the present study relates to our inference of the effect of the friendship manipulation. The friendship questionnaire used as a manipulation check was created for the purpose of this study and, although it proved a reliable scale, it has not been validated as a true measure of friendship. It appeared that our manipulation did increase the participants' liking of our confederates, however we are assuming that liking, and other aspects measured by the friendship questionnaires, are defining characteristics of friendship, or social relatedness. It is possible that we have missed other important characteristics of a relationship that make friendships what they are. Lastly, the population examined in this study (i.e. female undergraduate students mostly between the ages of 17 and 22) may not be representative of the individuals most often interviewed as alibi witnesses, especially when it comes to witnesses who are friends of criminal suspects.

To address some of these limitations, future research on alibi corroboration should study this behaviour among pairs of actual friends, and should also look at individuals who are

biologically related (e.g. siblings) to ensure a certain degree of closeness that should, according to previous research on alibi evaluation and generation, increase false alibi corroboration. False alibi corroboration could also be examined under implicit (as in this study) as well as explicit requests to lie for others. The type of crime should also be manipulated to include crimes against property, non-violent crimes, and violent crimes, as perhaps individuals' willingness to lie for others would vary as a function of the seriousness of the charges. Alibi corroboration should be examined among individuals from different populations to investigate the generalizability of the observed trends and rates of such behaviour. For example, some evidence from the psychological literature on lying suggests that women lie for one another more than men do (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996). Finally, future studies should attempt to increase the ecological validity by introducing mock authority figures (e.g. a security guard) in the experimental design.

## **Conclusion**

This study expands on the existing literature on alibis by providing the first empirical test of the assumption that those who are close to one another are more likely to lie for one another than are strangers. Although the results obtained suggest that this assumption may not be true, further research is undoubtedly necessary to ascertain if, and to what extent, the closeness to a suspect or defendant is related to an alibi witness's propensity to lie. We have also expanded the research on alibi corroboration by identifying another situational factor, perceived suspiciousness of a suspect, that can influence a witness's decision to corroborate or reject a false alibi. We have attempted in this paper to link the behaviour of deceptive alibi corroboration to basic psychological theory in order to better guide future related research endeavours. Most importantly, this study highlights the importance of substantiating findings from self-report

measures with behavioural measures. The methodology described in this study provides a new way to measure the direct behaviour of alibi corroboration and to examine the effects of factors believed to influence this interesting yet understudied deceptive behaviour. Findings from this line of research have important implications for the criminal justice system. A better understanding of the factors that lead individuals to lie by corroborating a false alibi can lead to improved guidelines for investigating alibis and for presenting alibis defences in court. For example, if certain characteristics of criminal cases are found to reliably increase the risk that an alibi witness will lie, such information could be useful to police in directing and prioritizing their investigative resources. Also, if widespread public perceptions regarding the likelihood that certain types of alibi witnesses are deceptive are found to be false, efforts should be made to minimize the potentially detrimental effects of these biases among judges and jurors. The benefits of this research have the potential to overcome the incredulity of alibi evidence in court and to prevent miscarriages of justice.

## Appendix A: Recruitment Advertisement

Study Name: Does Personality Affect Group Performance?

Abstract:

This 60-min social/cognitive study examines the role of personality traits and personality similarity or dissimilarity between peers on problem-solving. Participants will complete individual and group tasks and answer personality questionnaires.

Description:

All participants will be students at Ryerson University who are currently enrolled in an introductory psychology course. The session will be conducted with two participants at a time. Participants will complete a word generation task, a word-scramble task, and a memory task. They will also answer questions about their problem-solving strategies, their personality, and their opinions on the tasks. Some of the tasks will be done individually and some you will be doing collaboratively with the other participant. Part of the study session will be audio-recorded, and you may be asked to provide a physiological measure. The results of this study will help us better understand human behaviour and attitudes. Minimal anticipated risks are involved. It is possible that you may feel slight discomfort in answering some questions relating to beliefs or personal opinions. Participating in a study may be a new experience for you, and you can stop your participation either temporarily or permanently at any point without penalty. You are also free not to answer any and all questions you feel uncomfortable answering without penalty. Please arrive no earlier than 5 minutes before your scheduled session.



## Appendix B: Friendship Questionnaire

Please rate how much you agree or disagree with the following statements about the other participant with whom you will complete a collaborative task:

1. I like the participant that I am assigned to work with

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Completely disagree			Somewhat agree		Completely agree	

2. I dislike the participant I am assigned to work with

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Completely disagree			Somewhat agree		Completely agree	

3. I would exchange email addresses with the participant I am assigned to work with

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Completely disagree			Somewhat agree		Completely agree	

4. I would go to a party with the other participant if he/she invited me

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Completely disagree			Somewhat agree		Completely agree	

5. I would go sit beside the other participant if I saw him/her in a lecture

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
Completely disagree			Somewhat agree		Completely agree	



## Appendix C: Follow-Up Question

### **Please let us know:**

A follow-up to this study is scheduled to take place in a few months from now, and you may be recruited to participate.

Please let us know if you would be willing to come back to the lab for a follow-up study with the other participant you have been matched with today, by checking one of the following boxes below. Your decision will not affect in any way your course credit for your participation in this part of the study.

Yes

No



## Appendix D: Debriefing Questionnaire

Debriefing questions:

1. How suspicious were you of the confederate? (i.e. that she stole the money)

1      2      3      4      5      6      7      8      9      10

(sure she didn't do it)

(sure that she did it)

2. Did the confederate have money with her when she came back in the room?  Yes  No

3. Did you hear the confederate say "we were in here the whole time"?  Yes  No

4. Why did you or did you not say anything on the spot when she said that?

Momentarily forgot she went to the washroom

Did not want to get involved

Did not want to say anything in front of her

Didn't think she would have done it

---

---

5. Why did you say what you said when I asked you if she was here the whole time?

---

---

6. Why did you/did you not report that she had money?  n/a

---

---

7. Why did you support or not support her alibi that she was here the whole time?

---

---

8. Did you ever think that maybe you should/should not tell E that she went to the washroom?

---

9. Did you ever think that maybe you should/should not tell me about the money?

---

10. Thinking back to just after you finished the last group task ("memory task"), how would you rate your liking of the confederate?

1      2      3      4      5      6      7

## Appendix E: Coding Manual for Debriefing Questions # 4 - 9

“P” = Participant, “C” = Confederate, “E” = Experimenter

### 1) Responses relating to the alibi questions (questions 4, 5, 7, 8 - see page 2):

- *"Caught off guard"*: When P says that, for example, she did not say anything on the spot because she was caught off guard, was shocked, hadn't had time to process what was going on, etc.
- *"Irrelevance"*: When P says that she did or did not report that C went to the washroom because they thought it was irrelevant, either not important to report, or not anything wrong and therefore no need NOT to report it
- *"Avoiding false accusation"*: When P says that she didn't report that C left in order to avoid falsely accusing or incriminating C
- *"Morality-based response"*: When P says that she reported absence to E because it is the "right thing" to do, because stealing is wrong, because lying is wrong, etc.
- *"Compliance"*: When P says that she reported absence simply because she was asked directly or specifically
- *"Trust in C"*: When P says that she did not report absence because she does not believe that C was involved
- *"Preservation of trust"*: When P says that she did not report absence in order to maintain, or not lose, the trust of C
- *"Empathy towards E"*: When P says that she reported absence because she felt bad for E, thought E should know, etc.
- *"Avoiding confrontation"*: When P says that she did not say anything or did not report absence in order to avoid conflict between herself and C
- *"Memory lapse"*: When P claims that she did not report absence because she had forgotten it

### 2) Responses relating to the money questions (questions 6 & 9 - see page 2):

- *"Ownership belief"*: When P says that she did not report the money because she thought it was C's money, or did not even think it could be the stolen money (e.g. did not put "two and two together")

- *"Avoiding false accusation"*: When P says that she didn't report the money in order to avoid falsely accusing or incriminating C, because they were not certain that it was stolen money, etc.
- *"Empathy towards E"*: When P says that she reported the money because she felt bad for E, thought E should know, didn't want E to get into trouble, etc.
- *"Trust in C"*: When P says that she did not report money because she does not believe that C was involved, not suspicious of C
- *"Lack of awareness"*: When P claims that she did not report the money because she had not noticed it or did not remember it until debriefing
- *"Unclear missing item"*: When P claims that she did not hear or understand *what* went missing, or heard that something other than money went missing

### 3) Other response types:

- *"Concern for future interaction"*: When P expresses, in any answer, that she was worried about future interaction with C, that she was worried C was or would be mad at her, etc.
- *"Remorse"*: When P expresses feeling bad for having said something (or not), or that she would have felt bad for saying something
- *"Fear of blame"*: When P states that she feared getting blamed for the theft

## Appendix F: Study Scripts

### 1. Introductory instructions:

*Experimenter:* The goal of this study is to see how people with either very similar personalities or very dissimilar personalities perform on different kinds of cognitive tasks. So what you'll be asked to do throughout this study is to complete a series of tasks, either individually or together, and to answer questionnaires regarding these tasks and personality questionnaires and so on. First I'll ask that you read through the consent form. It tells you again about the purpose of this study, what you'll be asked to do, information about your rights as a participants, and confidentiality issues, etc. If you want to participate, please sign at the bottom, and I will be right back with the material to start.

### 2a) Instructions for personality check questionnaire – Friendship condition:

*Experimenter:* I just checked SONA, the online system, and you have been assigned to "similar personalities" condition. This was based on similar responses to part of the online pre-screen questionnaire that you would have completed earlier this term, on SONA.

*Confederate:* Oh, well we should get along then!

*Experimenter:* So that's what the condition assignment was based on, however the first thing that I will get you to do is to complete a second personality questionnaire just as a check, to make sure that the coding on SONA was done properly and that you really are assigned to the right condition. And just to give you an overview of how things will happen, after you do the personality check, you'll do a first group task, then you'll answer a series of questionnaires individually, then you'll do a second group task, then another individual questionnaire, and a third and final group task. Tasks that are done as a group you will do here in this room, and you will do the individual tasks separately in different rooms. But since this personality check is a short questionnaire I'll just have you do it in this room but I'll have one of you sit at this table to keep it as confidential as possible.

*[Personality check questionnaires handed]*

### 2b) Instructions for personality check questionnaire – Stranger condition:

*Experimenter:* I just checked SONA, the online system, and you have been assigned to "different personalities" condition. This was based on very different responses to part of the online pre-screen questionnaire that you would have completed earlier this term, on SONA.

*Experimenter:* So that's what the condition assignment was based on, however the first thing that I will get you to do is to complete a second personality questionnaire just as a check, to make

sure that the coding on SONA was done properly and that you really are assigned to the right condition. And just to give you an overview of how things will happen, after you do the personality check, you'll do a first task that will be done individually, then you'll answer a series of questionnaires, then you'll do a second task that you'll do together, then another individual questionnaire, and a third and final group task. Tasks that are done as a group you will do here in this room, and you will do the individual tasks separately in different rooms. Since your first task is done individually, I'll split you up right away, so you [participant] can stay here and if you [confederate] don't mind I'll ask you to follow me in the next room, and I'll bring you back for the group task.

*[Personality check questionnaire handed to participant]*

3a) Instructions for first task – Friendship condition:

*Experimenter:* Your first task is a word generation task. You can both work together on this grid, and you can both write on this grid. Your task is to find as many words as possible that are three letters or more, and that are spelled forward (from left to right), unless they are vertical in which case they can be spelled up or down. The words can be horizontal, diagonal, or vertical. You will have 8 minutes to complete the task. I will keep track of time for you and I will return when your time is up. In the meantime I will also check your personality questionnaires to make sure you are in the right condition.

3b) Instructions for first task – Stranger condition:

*Experimenter:* Your first task is a word generation task. Your task is to find as many words as possible that are three letters or more, and that are spelled forward (from left to right), unless they are vertical in which case they can be spelled up or down. The words can be horizontal, diagonal, or vertical. You will have 8 minutes to complete the task. I will keep track of time for you and I will return when your time is up. In the meantime I will also check your personality questionnaires to make sure you are in the right condition.

4a) Study group script, during word generation task (Friendship condition only):

*Confederate:* By the way my name is \_\_\_\_\_.

*Confederate:* Who's class are you in for psych?... Oh, me too! Hey I'm planning a study group for the next exam, you should come. [I'll actually be sending out Facebook invitations. Can I have your Facebook info so I can send you one?/ Where do you usually sit during class? I'll look out for you next week and I'll give you the details]

5a) Instructions for friendship questionnaire – Friendship condition:

*Experimenter:* Ok, your time is up. Oh, and just to let you know I looked over the personality questionnaires and you are in the right condition, so your personalities are quite similar. Next is a second questionnaire that you will answer individually so I will split you up in

separate rooms. So... you [participant] can stay here and if you [confederate] don't mind I'll ask you to follow me in the next room, and I'll bring you back for the next group task. This questionnaire relates to the task you just completed. I'll be back in a few minutes.

#### 5b) Instructions for friendship questionnaire – Stranger condition:

*Experimenter:* Ok, your time is up. Oh, and just to let you know I looked over the personality questionnaires and you are in the right condition, so your personalities are quite different. Next is a questionnaire that related to the task that you just did. Now some of these questions may sound weird, because some people do this task individually but some people do it together. So because you did it on your own some of the questions will sound odd, but try to answer them all as best you can anyway. I'll be back in a few minutes

#### 6. Instructions for second task:

*Experimenter:* This next task is a group one. There will be three parts to it, but I'll set you up for all three parts now because I have to run to the building next door to go pick up something, so I won't be here to do it as we go. All three parts are done on the computer, on PowerPoint, and they all have instructions, but I'll go through them quickly to make sure everything is clear. The first part is a word scramble task. You will be presented with word scrambles on the screen and you will have 8 minutes to complete as many words as you can. Here are your answer sheets for this task. The program is open and ready to go – it's called "task #1". I'll set this timer and start it before I leave, and when you hear it beep, you'll know to stop this task and move on to the next once. Once you are done each task, I'll ask that you place your answer sheets in this envelope. So when the timer beeps after this first task, just put your forms in here and then start the next task.

For the second part I actually only need one person to complete it. The reason for this is that it's not actually part of this study, but we're trying to choose some stimuli for an upcoming study, and so we need someone to rate some images. So I randomly picked a consent form earlier, and I picked [participant's first name] to do it. Is that okay with you? Great, here's your answer sheet for this. You'll be presented the images in PowerPoint and you just rate their attractiveness on this answer sheet. Now the only other thing I need though is a physiological measure from you as you're doing this task. This just means that I'll ask you to wear a finger pulse monitor. Is that okay? Let me set this up for you now since I won't be here to do it later. You really only need this for the second task, but I'll ask that you leave it on until I come back to make sure that everything is done properly. This monitor is synched with a computer program in the office next door. I'll make sure that everything is working fine before I leave. The file with the images is open, and is called "task #2". You just need to start it once and the presentation of the images is on a timer. Please let the timer run on its' own so that we

can tell when you're looking at each image. Here's the rating form for this part. [To the confederate] You don't really have to do anything during this part, but it shouldn't take very long, about 5 minutes.

Ok, so finally the third part is a memory task. Again the instructions and material will be presented to you on the computer screen, and you'll have your own answer sheets. The file is called "task #3". You can start it as soon as the image-rating task is done. For this task, just follow the instructions on the screen. I should be back before the end of this task, and I'll then set you up for the next questionnaire. So let me start this timer for the first task, and you can start now.

7. Washroom script, at start of image-rating task:

*Confederate:* I'm just going to go find the washroom. I'll be back in a minute.

8. Experimenter returns:

*Experimenter:* I'm back... oh, I'll let you finish – be back in a bit.

9. Mock theft:

*Experimenter:* Are you all done? Ok. Did either of you see or hear anyone go in the other room while I was away, because I just realized now that some money went missing.

*Confederate:* No, we were both in here the whole time.

*Experimenter:* Hmm. Ok... Um, I'll have to deal with it after. So let's finish up the session then... The next thing to do is a last questionnaire, and then a last short group task. So if you [confederate] don't mind again I'll ask you to go in the next room for this and I'll bring you back for the last task. And I'll be right back to take the monitor off for you [participant].

Ok, so I checked the computer next door and the monitor worked fine, and so we have a continuous measure for you. So I know that you were here... was she here the whole time as well?

## Appendix G: Consent Agreement

### Does Personality Affect Group Problem-Solving?

You are being asked to participate in a research study. Before signing this consent form, it is important that you read the following information. You may ask as many questions as necessary to be sure that you understand what the study entails.

#### Investigators:

Stephanie Marion, B.Sc. Graduate Student Ryerson University	Tara Burke, Ph.D. Department of Psychology Ryerson University
-------------------------------------------------------------------	---------------------------------------------------------------------

Purpose of the Study: The primary purpose of this study is to examine how individuals with similar or dissimilar personality characteristics work together toward a common goal. We are hoping to recruit 180 students to participate in this research. All students taking Introductory Psychology (Psy102 or Psy202) are eligible to participate.

Description of the Study: If you decide to participate in the research, you will be asked to do the following: you will complete a word-generation task, a word scramble task and a memory task. Some of these tasks you will do individually and some you will be doing with another participant with whom you have been matched based on similar or dissimilar personality characteristics. You may also be asked to provide a physiological measure during part of this study. This would entail wearing a pulse monitor on your index finger to provide a physiological measure in response to images. This study will take place in psychology lab at 105 Bond St and will take approximately 60 minutes to complete.

What is Experimental in this Study: None of the procedures or questionnaires used in this study are experimental in nature, in the sense that they have all been used in previous cognitive and personality research. From a technical or procedural point of view, part of this study is considered “experimental”, because by following the procedure described above, the study examines the impact of one variable (called the “independent variable”) on another variables (called the “dependent variable”). More information about the independent and dependent variable will be provided at the end of the session.

Risks or Discomforts: Occasionally people feel uncomfortable when answering questionnaires that ask about attitudes and personal opinions toward controversial social issues (e.g., affirmative action). We do not believe that the questionnaires provided examine such controversial issues. However, if any aspect of this study makes you feel uncomfortable, you may choose not to answer certain questions, or to withdraw from the study at any time.

Benefits of the Study: We anticipate that you will benefit from this study by learning about ways that psychological research can contribute to learning and problem-solving. When the session is over, we will describe the purpose and hypotheses of the study to you in more detail. Please note that some goals of the study will not be revealed to you until the end of your study session. Once we have analyzed the data, you are welcome to ask about the results. However, we cannot guarantee that you will receive any direct benefits from participating in this study.

Confidentiality: Your responses in this research will remain strictly confidential. You will not put your name or student number on the questionnaires. Rather, the questionnaires will be identified by number

only. You will be asked to sign only this consent form (if you decide to participate), and it will be filed separately from your questionnaires. The data from this study will be held in a locked lab room in Dr. Burke's lab, to which only investigators, supervising faculty, and research assistants will have access. The data will be kept for five years, after which time it will be destroyed.

Incentives to Participate: Although we appreciate the contributions of participants in our research, you will not be paid for your participation in this study. However, you will receive a 1% course credit toward the 3% research participation mark in your Introductory Psychology course. If you would prefer to walk through the study (that is, if you would like to observe the research process but not provide any personal data), you will still be given 1% course credit.

Voluntary Nature of Participation: Participation in this study is voluntary. Your choice of whether or not to participate will not affect your grades or academic status or your future relations with the University. If you decide to participate, you are free to withdraw your consent and to stop your participation at any time without penalty or loss of benefits to which you are allowed. Should you withdraw from the study, you will still be given 1% course credit (provided that you have not already received the maximum allotted for research participation of 3%).

Questions about the Study: If you have any questions about the research now, please ask. If you have questions later about the research, you may contact:

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If you have any questions regarding your rights as a human participant in this study, you may contact the Ryerson University Research Ethics Board for information: Alexander Karabanow, [alex.karabanow@ryerson.ca](mailto:alex.karabanow@ryerson.ca), (416) 979-5000 ext 7112.

Agreement: Your signature below indicates that you have read the information in this agreement and have had a chance to ask any questions you have about the study. Your signature also indicates that you agree to be in the study and have been told that you can change your mind any time during the study and draw from it.

You have been told that by signing this consent agreement, you are not giving up any of your legal rights.

\_\_\_\_\_  
Name of Participant (please print)

\_\_\_\_\_  
Signature of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Experimenter

\_\_\_\_\_  
Date

## Appendix H: Debriefing form

Thank you for participating in this experiment. As you may recall, you were told that the aim of this study was to examine how similar and dissimilar personality characteristics affect problem-solving skills. However, the actual purpose of this research is to examine the impact of interpersonal relationship on alibi corroboration. An alibi is a type of statement that a person suspected of a crime provides to police to indicate that he or she could not have committed the crime due to being elsewhere from where the crime was committed. Sometimes such statements are corroborated (or confirmed) by another witness. In this study, we want to know whether people who feel closer to one another (such as friends) are more likely to support one another's alibi, even if the alibi provided is false.

Courts seem to think that people lie for one another, and especially those who are close to one another. This assumption has important implications for the believability of a defendant's alibi in court. This study examines the validity of this assumption. To simulate different degrees of relationship, the affiliation between the two participants (an independent variable) was manipulated in this experiment. The other participant in this study was actually a confederate - someone who is aware of the experiment and is helping out the experimenter. While all participants completed the same tasks, some completed the first one alone, and others completed it with the confederate. The participants who did the first task alone were told that their personality was dissimilar to that of the confederate, and those who did the first task in pairs were told that their personality was similar to that of the confederate. This was done in order to create feelings of unfamiliarity in the first case, or feelings of friendship in the second case.

We hypothesized that participants who have been involved in friendship-enhancing activities will be more likely, when questioned alone, to corroborate the confederate's alibi than those who remained strangers. That is, they would be more likely to agree that the confederate remained in the study room during the entire session (the dependent variable).

The purpose of the study is to understand how personal affiliations to others influence the likelihood of supporting a statement that may not be completely true. The results will contribute to our theoretical understanding of alibi corroboration and perception, and will allow us to make recommendations to the police regarding their ability to assess the credibility of alibis. The results also have implications for police investigative processes and for determining factors involved in wrongful convictions.

As I'm sure you noticed there was some deception in this experiment—that is, some aspects of the studies were not exactly as originally described. In particular, there were no other real participants, and the information you received about the purpose of the study was not fully explained to you at the start. The other person involved in this study was a confederate – he or she was a trained lab volunteer. Our main interests were in how you would respond when asked whether the confederate had been in the study room during the entire session. We hope that you understand the reasons why the real purpose of the experiment could not be revealed to you until now. We couldn't have obtained your unbiased reactions to the situations if you had known exactly what we were interested in. As a result, we had to set up somewhat contrived situations.

We would like to remind you that your results are confidential to the experimenters and that all results are published anonymously as a group. However, if you feel uncomfortable about any aspect of the study, you are free to request to have your data withdrawn from the sample. Also, if you know of others who will be participating in this experiment, please refrain from discussing it with them. We do not want our future participants to be aware of the procedures and expected findings.

We would like to thank you again for your participation in our study. Please retain your consent form for future reference and feel free to contact the student experimenter of Professor Burke if you have any further questions or concerns, or if you would like any information about the results once it is completed:

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## Appendix I: Debriefing Script

The study is now over and I will debrief you in just a moment. First I'd like to ask a couple of post-study questions.

First, if I were to ask you what the study was about, what would you say, in a few words or a sentence?

Good. There is no right or wrong answer to that question. The reason why I ask this first is because we are using a new methodology and I like to get an idea what participants think of it, and also because we were using some deception in this study. I will now go through the study with you and tell you exactly what we were doing and why.

First, the whole cognitive performance aspect of the study was really a cover-up for what we were really looking at. This was much more of a social psychology study than a cognitive or personality psychology study. Specifically, we are interested in the likelihood that people will support each others' statements based on how much they like one another. Now I know this is very different from what you were originally told this study was about. So basically the whole session led up to this last part to when I told you that money had gone missing. Just to be clear, no money has gone missing, and I said that because we want to see how people react to that scenario, again based on how much two people like one another. Let me explain in detail exactly what we did. In this study, we are trying to manipulate how much people like each other. There are two conditions that I am running – one that I call the friendship condition and the other that I call the stranger condition. You took part in the \_\_\_\_\_ condition. I try to manipulate liking in two ways – with the use of personality measures and with interaction. In the friendship condition I tell people that they have very similar conditions, so that they might think that they have a lot in common with the other person and therefore like them more. In the stranger condition, on the other hand, I tell people that they have very different personalities so they might think that they don't have that much in common with the other person. I also vary the degree of interaction between the two people. In the friendship condition, the first task that you did, the word-generation task, is done with the other person, and there is therefore interaction throughout the whole study. In the stranger condition, the first task was done individually, with the two of you in different rooms, and therefore there is not real interaction until the second part of the session. So this is how, in one condition, we try to increase liking between individuals, and in the other condition, we try to keep it at a stranger relationship base rate, as it was before you started the study.

During the second part of the study we then introduce the mock theft. One thing I should tell you at this point is that the other person you were working with was actually a confederate in this study. A confederate is someone who pretends to be a participant but who is really working with the experimenter. \_\_\_\_\_ is a volunteer in this lab and does this a few times a week. So she is instructed to always leave to go to the washroom during the image-rating task, and then I always come back later and say that money went missing and ask if anyone saw anything, and the confederate always says "no we were here the whole time". And we are interested to see whether people are willing to support her claim that she was here the whole time, or not. Does that procedure make sense to you so far?

I have a few questions to ask you to get an idea of your thought process at various stages during the study, and also to make sure that things happened as they were supposed to.

First, did you have any suspicions as to the purpose of the study at any point throughout the session?

[Experimenter then goes through the debriefing questionnaire]

I will now explain to you briefly the rationale behind this study. The reason why we are doing this kind of study is because we want to relate the results of this study to a legal situation in which a defendant brings up an alibi, either during an investigation or at trial. What seems to happen in this case is that usually if an alibi is corroborated, or supported, it is supported by a friend or a family member, which is reasonable since that's who we spend most of our time with. However, it seems that jurors and the police tend to not really believe an alibi unless it's corroborated, or supported, by a complete stranger, which does not happen very often. So, it seems that people have this assumption that friends and family members are more likely to lie for one another, or cover up for one another, than are strangers. Again, this seems like a reasonable assumption, but we are trying to test this assumption empirically. So we want to know, what is the likelihood that a stranger would cover up for another stranger, versus a friend for another friend? And this is what we are trying to look at. Does this make sense? Do you understand the parallel between the legal alibi context and this study? Do you have any questions about the rationale or the study itself?

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