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Ink vs Inc: The Influence of Visible Tattoos on Trustworthiness and Learning

D'Lisa N. McKee

Ink vs Inc: The influence of visible tattoos on trustworthiness and learning

By

D'Lisa N. McKee

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Ink vs Inc: The influence of visible tattoos on trustworthiness and learning

By

D'Lisa N. McKee

Approved:

_____

Timothy R. Barnett
(Major Professor)

_____

Rebecca G. Long
(Co-Major Professor)

_____

G. Stephen Taylor
(Committee Member)

_____

Laura Marler Templeton
(Committee Member)

_____

Kent Marett
(Committee Member)

_____

Nicole Ponder
(Graduate Coordinator)

_____

Sharon L. Oswald
Dean
College of Business

Name: D'Lisa N. McKee

Date of Degree: December 11, 2015

Institution: Mississippi State University

Major Field: Management

Major Professors: Timothy R. Barnett & Rebecca G. Long

Title of Study: Ink vs Inc: The influence of visible tattoos on trustworthiness and learning

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Candidate for Degree of Doctor of Philosophy

An emerging concern for employers is the impact of visible body modification (VBM) in the workplace. Visible body modification includes tattoos, piercings, or implants that are both visible and observable on an individual's body. The extant research on VBM suggests that employers are hesitant to hire those with visible tattoos or piercings, but fails to address how employees with VBM influence organizational outcomes. This dissertation examines how a specific type of VBM, visible tattoos, influences training and learning by investigating how a trainer's visible tattoos affect trainees' perceived trustworthiness and learning in a training context.

The study used a sample of 164 undergraduate students and Amazon Mechanical Turk workers to assess reactions to a trainer's visible tattoos. Subjects were randomly assigned to one of three treatment groups, with the two experimental groups having a trainer with one tattoo or full tattoo sleeves. The results indicated that there were no significant differences between groups for perceived trustworthiness or learning. Similarly, there was no support for the moderating effect of openness to experience, authoritarianism, or learning goal orientation. Social distance was found to moderate the

relationship between the treatment and perceived trustworthiness. The findings of this study suggest that for the trainer and tattoos used, visible tattoos do not an impact on training outcomes. As this study was limited to one trainer with one type of tattoos, this preliminary evidence suggests that more research is needed to address the diversity of tattooing and VBM as a whole.

DEDICATION

This dissertation is dedicated to Stephanie Obert, Mitzi Harris, Caroline Tubbs, Kathleen Swift, and Sue Pitts, who are all amazing teachers.

It is also dedicated to my mom and dad, who were my first teachers.

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And River… she is always so helpful.

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CHAPTER I

INTRODUCTION

This dissertation examines the impact of a trainer's visible body modification (VBM) on the perceived trustworthiness of the trainer and subsequent trainee learning. Presently, there are no studies examining these specific relationships. Those that do address the impact of VBM in organizations are primarily limited to assessing attitudes about job applicants who have tattoos and piercings, often testing the influence of VBM on an employer's decision to hire. The overwhelming evidence from these studies suggests that employers hold negative attitudes about body modification (e.g. Dale, Bevill, Roach, Glasgow, & Bracy, 2009), which can consequently impact staffing decisions (Brallier, Maguire, Smith, & Palm, 2011; Elzweig & Peeples, 2011; Burgess & Clark, 2010; Swanger, 2006). The broader literature on physical appearance and hiring shows that this type of discrimination is not uncommon, as image norms and attractiveness play a role in the recruitment and selection process (Hurley-Hanson & Giannantonio, 2006; Nicklin & Roch, 2008; Stevenage & McKay, 1999). In one study on VBM, Miller, Nichols, and Eure (2009) extend the exploration of these negative attitudes to include employee reactions to hypothetical co-workers with tattoos, finding that subjects did not want co-workers with VBM if they shared workplace rewards with the co-worker or if co-workers had face-to-face contact with customers, thus indicating that attitudes about VBM can also influence individual employee attitudes. As a whole,

however, the body of literature on VBM in organizations is small and is primarily limited to employer attitudes and selection outcomes.

Presently, VBM lacks a theoretical foundation from which to assess its impact on measurable outcomes important to an organization, such as effective training and learning. Rather, extant research focuses primarily on confirming that employers and employees possess negative attitudes regarding VBM. However, since it does not draw direct ties to desired outcomes, this approach is limited in its usefulness. Researchers have used social cognition and group norms theory to explain why those with VBM are subject to prejudice and discrimination in the workplace (Miller et al., 2009), but they stop short of fully taking into account how social cognition may then influence the success of organizational processes. Accordingly, this dissertation uses attribution theory to link social cognition to training outcomes through perceived trustworthiness. Attribution theory is a social cognition theory that explains how an observer of a behavior determines the cause and motivation of that behavior and uses that information to anticipate future motivations and behaviors (Fiske & Taylor, 1991).

In addition to a theoretical explanation, empirical evidence regarding how attitudes about VBM impacts desired outcomes is also necessary to establish whether management decisions should be made based on VBM. In particular, one type of outcome that can be assessed is training effectiveness. Through evaluating the learning outcomes of trainees exposed to trainers with VBM, it is possible to determine if the presence of VBM does indeed interfere with organizational goals, in this instance successful training and learning.

Attitudes about VBM emerge between individuals, specifically in dyadic relationships between members of an organization. Thus, for example, to understand whether a trainer with tattoos might affect trainee learning, it is first necessary to establish how perceptions of VBM may influence trainee perceptions about the qualities or characteristics of a tattooed trainer. Theories of social cognition, and attribution theory specifically, suggest that how a trainee perceives a trainer will in turn influence expectations of the trainer's motivations and future behaviors (Fiske & Taylor, 1991). For example, when explaining why a trainer has VBM, an observer may use tattoos as a causal attribution, which may then influence a trainee's evaluation of a trainer's trustworthiness (e.g. Mayer, Davis, & Schoorman, 1995). This dissertation hypothesizes that trustworthiness in a training scenario has the potential to influence whether or not trainees accept information that is disseminated to them; thus, it can impact learning. As attitudinal antecedents have the potential to influence training effectiveness (Mathieu, Tannenbaum, & Salas, 1992), this creates a need for further understanding of what attitudes may arise in the workplace due to employee perceptions of VBM.

Reactions to VBM are, in part, a result of causal attributions and social cognition, both of which allow an observer to determine the cause of a specific behavior and anticipate future behaviors based on behavioral and social cues (Fiske & Taylor, 1991). Social understanding can be influenced by social categorization (Karasawa, 2011), one's social identity (e.g. Turner, 1982) and one's understanding of social norms (Fiske & Taylor, 1991), all of which can guide the formation of perceptions and attitudes about someone with VBM. Furthermore, individual personality traits such as openness to experience (Barrick & Mount, 1991), authoritarianism (Altemeyer, 1996), and perceived

social distance from the individual with VBM (St-James, de Man, & Stout, 2006) may also influence the extent to which those perceptions are developed. Together, these personality traits may influence the perceived trustworthiness of an individual with VBM.

These attitudes may impact and potentially interfere with organizational objectives, such as successful training, particularly when elements of the training alter a training outcome such as learning (Alliger & Janak, 1989). The organizational literature on training highlights the characteristics of the trainee (e.g. personality), job and career variables, characteristics of the organization (e.g. culture), and situational variables (e.g. manager support or content of the training) as potential influences on the training process. Ultimately, these can then influence transfer of training (Baldwin & Ford, 1988; Colquitt, LePine, & Noe, 2000; Cheng & Hampson, 2008). Moreover, as is the case with the development of attitudes, it is likely that individual personality traits of the trainee, such as goal orientation (Dweck & Leggett, 1988), will influence learning. However, as training and learning are products of the dyadic exchange between the trainer and the trainee, when the trainee uses social cognition to evaluate the trainer, it is anticipated that characteristics of the trainer should also impact the training process, and thus learning as well (Ghosh, Satyawadi, Joshi, Ranjan, & Singh 2012). The presence of VBM is expected to influence learning due to the impact of perceived trainer characteristics on learning, and it is also expected to influence learning through its impact on perceived trustworthiness. This dissertation suggests that trainee perceptions of trainers with VBM, and subsequent causal attributions related to the trainer's VBM, will influence how trustworthy a trainee finds a trainer. This in turn is expected to influence training and learning outcomes. By evaluating attitudes about a trainer with tattoos and also

measuring learning, it is possible to examine whether VBM is an important consideration for organizations when they choose trainers. The generalized conceptual model is presented in Figure 1.1. A detailed model with all constructs is provided in Chapter 2.

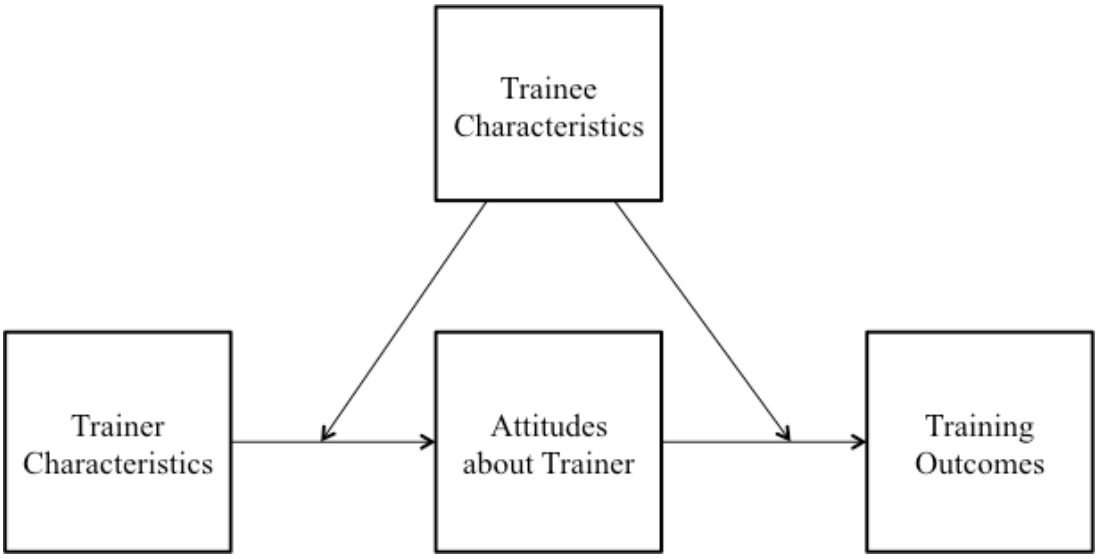

Figure 1.1 Generalized Conceptual Model

This introduction details the need for further research on visible body modification in the workplace, as it is becoming more common in society at large. The introduction also provides the rationale for this dissertation and an overview of the expected relationships between trainer characteristics such as VBM, perceptions of the trainer, and training outcomes. The remainder of this chapter is organized into six sections: (1) definition of key terms, (2) statement of the research problem, (3) significance of the study, (4) research approach, (5) limitations and assumptions, and (6) outline of subsequent chapters.

1.1 Definition of Key Terms

The hypothesized relationships between the constructs of interest in this dissertation are discussed in detail in the following chapters. To establish how the constructs in this dissertation are conceptualized, the following terms are defined in this section: (a) visible body modification, (b) trustworthiness, (c) learning, (d) openness to experience, (e) authoritarianism, (f) social distance, and (g) goal orientation.

1.1.1 Visible Body Modification

The practice of tattooing or piercing one's own body, sometimes referred to as "body art" (e.g. Lipscomb, Jones, & Totten, 2008), often results in the permanent alteration of an individual's physical appearance. The nature and motivation for this behavior varies (Pentina, Spears, & Sager, 2007), but the end result is a change in how a person looks or appears. Some types of modifications or alterations to one's body are deemed more socially acceptable than others. For instance, in western cultures, it is not unusual for females to have pierced ear lobes and wear earrings. However, it is generally not as common to have pierced nostrils and wear nose rings. Similarly, tattooed "permanent makeup" may go unnoticed, while a teardrop tattooed on a face may not. All are alterations to an individual's appearance; however, some alterations are deemed more socially acceptable than others. Those that do not fit the prevailing norm may then be viewed as being socially deviant (Kosut, 2006).

In order to focus on body alterations that go beyond common socially acceptable cosmetic practices, this dissertation defines Visible Body Modification (VBM) as tattoos, piercings, or implants that are both visible and observable on an individual's body, and restricts VBM by excluding cosmetic tattooing (e.g. permanent eyeliner or eye shadow),

fewer than two piercings per earlobe, or cosmetic procedures done to seem to be part of one's natural appearance. Based on this definition, breast implants or rhinoplasty would not be considered VBM, whereas horn implants on one's forehead would. While these distinctions can be difficult to make, the intent of this definition is to focus on body modifications that would generally fall outside the norm of what Western society accepts as being common or unremarkable, such as visible tattoos.

This definition is based on multiple sources that refer to or use some variant of a definition of VBM. Wohlrab, Stahl, Rammsayer, & Kappeler (2007) and Forbes (2001) use the term body modification to refer to tattoos and piercings, as do Elzweig and Peeples (2011), who also limit piercing to "anywhere in the body besides the soft spot of the earlobe" (13: 2011). For the purpose of this dissertation, VBM will be specifically operationalized as the presence of tattoos that are both visible and observable on an individual's body. Both Brallier and colleagues (2011) and Swanger (2006) use VBM to refer to tattoos and piercings that are visible. Dale, Bevill, Roach, Glasgow, and Bracy (2009) (who use the term "body adornment") add the caveat of "when dressed for work" (Dale et al., 2009: 70). This distinction is appropriate, as when a body modification is covered with normal work attire, the individual is perceived as not having any sort of body modification.

1.1.2 Trustworthiness

Trustworthiness is defined as a willingness to place trust in someone, based on the assessment of how likely the other party is to betray that trust (e.g. McAllister, 1995). At its most basic level, it involves determining whether the other party has motivation to deceive or mislead (Mayer et al., 1995). For this dissertation, however, determining

whether another party has a motivation to lie is inadequate to fully explain the construct of interest. As a residual effect of determining whether another has the motivation to lie, trustworthiness, at its core, is an individual's perception of whether or not they should place trust and confidence in another, and if so, to what extent. Trustworthiness encompasses both an affective and cognitive element, in that the propensity to trust is borne out of both emotional and rational considerations (McAllister, 1995). Cognitively, trustworthiness depends on the perceived ability, benevolence, and integrity of the individual in question (Mayer et al., 1995).

The first factor, ability, assesses the competency of the individual to determine if he or she actually possesses the needed skills or knowledge necessary for a task (Mayer et al., 1995). In this dissertation, trainees are expected to assess the ability of the trainer to skillfully and knowledgeably impart training. Benevolence is the perceived level of the trustee's desire to do good for the trustor, without the inducement of a reward for doing so. Lastly, integrity is the perception that the individual will adhere to a set of acceptable moral principles (Mayer et al., 1995).

1.1.3 Learning

Successful training impacts a number of outcomes for an organization, as it provides the knowledge, skills, and abilities (KSAs) that can increase employee performance (Blume, Ford, Baldwin & Huang, 2010). Learning is one of Kirkpatrick's (1977) four training evaluation criteria, which will be further discussed in Chapter 2, and is defined as the "principles, facts, and techniques understood and absorbed" by trainees (Alliger & Janak, 1989). By testing the amount of information an individual has retained about a subject, initial learning can be assessed (e.g. Mathieu et al., 1992). Accordingly,

it is anticipated that the amount an employee learns during training will have a positive impact on subsequent job knowledge.

1.1.4 Trainee Characteristics

This dissertation examines how individual reactions to tattoos impact training outcomes. How individual trainees react to VBM and how this will subsequently influence training should be moderated by individual personality traits and the characteristics of the trainee. The first trainee characteristic considered is openness to experience. As one of the "Big Five" personality traits, openness to experience involves an individual's willingness to be exposed to or accept novel ideas or situations (Barrick & Mount, 1991; McCrae & Costa, 1987). This personality trait is characterized as being "curious, broadminded, cultured, and intelligent" (Barrick & Mount, 1991: 6), and "original, imaginative, [having] broad interest, and daring" (McCrae & Costa, 1987: 82). In some circumstances, the characteristics of those high in openness to experience are also very similar to those who are seen as creative (McCrae, 1987). The curiosity and broadmindedness that typify openness to experience may influence the extent to which tattoos on a trainer will influence perceptions of that trainer.

The second personality trait of interest is authoritarianism, defined in terms of three components. First, it involves "a high degree of submission to the authorities" (Altemeyer, 1996: 6) that one views as being legitimate in society. Second, it involves "a general aggressiveness… that is perceived to be sanctioned by established authorities" (Altemeyer, 1996: 6). This is not necessarily physical aggression, but rather could involve a number of reactions meant to enforce or maintain the establishment (Altemeyer, 1996). Lastly, it involves conventionalism, or "a high degree of adherence

to the social conventions that are perceived to be endorsed by society and its established authorities" (Altemeyer, 1996: 6). One key component is that those high on authoritarian trust and defer to authorities they perceive to be legitimate. In the context of this dissertation, of particular interest is the manner by which those who score high on the authoritarian scale respond to and seek to uphold societal norms.

A third trainee characteristic expected to influence perceptions of the trainer is the trainee's perceived social distance from the trainer. Social distance is defined as the degree to which a person finds another to be socially acceptable or perhaps even similar (e.g. St-James et al., 2006). Social distance establishes what level of social interaction and closeness (e.g. friend or neighbor) a person is comfortable experiencing with another. Measuring social distance between two people is useful in ascertaining how socially similar or different one person finds another.

The fourth trainee characteristic addressed in this dissertation is goal orientation. Goal orientation is the way in which an individual approaches an "achievement situation" (Hirst, von Knippenberk, & Zhou, 2009: 281). Research suggests that when individuals encounter situations that are challenging, they adopt one of two major approaches: a learning goal orientation or a performance goal orientation (Dweck & Leggett, 1988). Those with a learning goal orientation regard challenges as opportunities to gain knowledge and mastery, and ultimately focus on improving their performance (Seijts, Latham, Tasa, & Latham, 2004). Those with a performance goal orientation prefer tasks that allow them to demonstrate their abilities or competence, with less concern for actually developing knowledge (Seijts et al., 2004). This performance goal orientation can be further broken into two types, a performance-approach or a performance-

avoidance orientation (Elliot & Harackiewicz, 1996), with a performance-approach focused on demonstrating competence and performance-avoidance focused on avoiding appearing to be unable to do the task. In the context of training and learning, goal orientation on the part of the trainee may be important, as learning success may be, in part, influenced by this trainee characteristic.

1.2 Statement of Research Problem

The main objective of this dissertation is to establish both theoretically and empirically the impact visible body modification, as operationalized by tattooing, has on the training process. The prevalence of tattooing in recent years has increased, particularly among those born after 1980 (Pew Research Center, 2010). This dissertation seeks to answer the question, "How does a trainer's VBM affect trainees' perceptions of the trainer and the training process, as well as subsequent learning?" This research attempts to advance the study of VBM beyond hiring decisions, and instead focuses on determining if VBM influences the training process, which is of major importance to the organization. The literature on VBM, though relatively small, suggests that managers prefer not to hire those with VBM (e.g. Brallier et al., 2011). However, the literature does not address how VBM may impact organizational processes such as training, and thus, has limited utility for strategic staffing decisions.

This dissertation addresses the phenomenon at the dyadic level between a trainee and a trainer through the lens of attribution theory. At the level of dyadic exchange between a trainer and a trainee, this dissertation attempts to answer the question, "How do trainees react to trainers with visible tattoos?" This research then attempts to determine how these reactions and perceptions produce causal attributions that can

influence attitudes such as trustworthiness (e.g. Mayer et al., 1995). Lastly, this dissertation seeks to establish how attitudes about tattoos and perceptions of trustworthiness may affect trainee learning.

1.3 Significance of the Study

This dissertation seeks to further the study and understanding of Visible Body Modification and how it influences a key training outcome, learning. A contribution of this dissertation is that it extends the study of VBM by developing a theoretical rationale to explain how VBM (specifically tattoos) might impact training. Attribution theory is utilized to explain how trainees' perceptions of a tattooed trainer may influence expectations of trustworthiness. By taking this approach, this dissertation provides empirical evidence about whether VBM may actually influence an outcome such as learning. Prior research indicates that decision-makers often regard VBM as an impediment to business, associating it with other types of deviant behavior. Accordingly, this dissertation also offers an initial examination of whether VBM is indeed a useful consideration for managerial decisions.

Additionally, this dissertation examines what role trainer characteristics may have on the training process. Three major inputs are generally examined in the process of learning and retention. They include characteristics of the trainee (e.g. personality), training design, and the work environment (Baldwin & Ford, 1988; Blume et al., 2010). One potentially key training input that is not widely studied is trainer characteristics. Ghosh and colleagues (2012) provide a summary table of past research on trainer attributes. With the few exceptions highlighted in this review(cf. Ghosh et al., 2012), under the present model of training (e.g. Baldwin & Ford, 1988; Blume et al., 2010),

there is an unspoken assumption that trainer characteristics are (1) controlled for, (2) subsumed under training design or (3) part of the work environment.

1.4 Research Approach

The data used in this study was collected through a quasi-experimental design (Cook & Campbell, 1979) conducted with subjects assuming the role of "trainees." Subjects were asked to participate in a study on the effectiveness of computer-based learning for an entry-level white collar job of bank teller. Subjects were randomly assigned to either a control or experimental condition, with the experimental conditions having a trainer with visible tattoos. By simulating a job training session, learning could then be assessed to determine if the subject retains information from the training. Personality, social distance, perceptions of trustworthiness, and a set of control variables were measured at appropriate times during the process to test hypothesized relationships without alerting the subject to the purpose of the study. Hypotheses were tested using multivariate analysis of covariance (MANCOVA) and hierarchical regression. Additionally, mediation was tested using the method outlined by Preacher and Hayes (2004).

Because the study is one of the first to consider the actual implications (i.e. trainee learning) of VBM (e.g. Miller et al., 2009), significant outcomes either in accordance with, or in juxtaposition to, hypothesized relationships each provide predictive evidence for the influence of tattoos on organizational outcomes. That is, if the data suggest either a positive or negative relationship between the presence of trainer tattoos, trustworthiness, and/or learning, the outcome provides empirical evidence of the impact of visible tattoos in the workplace.

The least desirable outcome, finding that none of the proposed relationships are supported, would suggest at a minimum that the theoretical basis for this study is not adequate. The lack of significance does not suggest that there is no theoretical rationale for a predictable outcome regarding VBM. Rather, this would suggest that the proposed theoretical underpinning would need to be revisited. Even if this occurs, this dissertation can contribute to the literature, as it still provides the preliminary examination of how visible body modification plays a role in organizational performance.

1.5 Limitations & Assumptions

One of the limitations of this dissertation is the quasi-experimental design utilized in the empirical study. A simulated training environment is required, which limits generalizability. While one strength of the study is that the tattoos are controlled within conditions, it is also a limitation, as the size, number, and style of tattoos can only be tested in a limited number of combinations. Outside of the experimental or quasi-experimental milieu, visible body modification comes in many forms.

A second limitation of the study is the reliance on a sample of both student and non-student adults recruited from Amazon Mechanical Turk (mTurk), as students are not perceived as perfect proxies for employees. However, this limitation of including students is mitigated by the fact that the training that will be conducted is specifically for an entry-level bank teller job that is familiar to students and recent graduates and is also a job they could obtain as students. Further, while it may seem counterintuitive to test for reactions to tattoos within the age group that is most likely to have tattoos, it is also a potential strength of this research. Subjects used in this study may be the subset of the population most likely to have tattoos (Pew Research Center, 2010), but the numbers

suggest that a minority of those born after 1980 (38%) actually have tattoos (Pew Research Center, 2010). Furthermore, college students are less likely to have tattoos (30%) than their counterparts who have not attended college (47%) (Pew Research Center, 2010). The percentage of tattoos for those born between 1965 and 1980 is relatively similar, at an estimated 32% (Pew Research Center, 2010). Moreover, while the study does control for respondent tattoos, having a tattoo does not necessarily suggest that a person will approve of another's tattoos. Rather, the research in the sociological literature suggests that not all tattooed individuals identity with tattoos (Degelman & Price, 2002), as subjects with tattoos may evaluate others with tattoos more harshly.

A third limitation of this study is that while trustworthiness and learning are examined, they are not the only potential training outcomes that visible body modification may impact. The number of potential outcomes is numerous and dependent upon the specific job requirements faced by an employee. As Miller and colleagues (2009) determined, how acceptable employees found VBM to be was, in part, influenced by the nature of their interaction with their co-workers, the extent to which rewards were shared, and even the type of responsibilities the co-worker had. As a result, it may be the case that VBM's impact may vary based on job type and function.

1.6 Outline of Study

This dissertation begins by examining the current state of the organizational literature on visible body modification, which is primarily limited to the recruiting and hiring implications of VBM. This dissertation attempts to extend this research by establishing a theoretical basis from which to understand the impact of visible body modification (specifically tattoos) on training, which, like recruiting and hiring, is an

essential human resource management process. The theoretical framework of this dissertation can be broken into two major sections, (1) the influence of tattoos on individual attitudes and perceptions within a dyadic relationship (trainer and trainee), and (2) the impact of these perceptions on training and learning.

Chapter II further examines and reviews the extant literature on VBM, trainee characteristics, trustworthiness, and learning, and develops the theoretical model and hypotheses for the study. The examination of trainee attitudes and perceptions relies on attribution theory (e.g. Jones & Davis, 1956) to explain how trainees will encounter and perceive trainers. With the addition of individual characteristics and personality traits such as openness to experience, authoritarianism, and perceived social distance, hypotheses are developed regarding trustworthiness. After this, the second key area of the study, learning, is then discussed as an outcome of a training process, as is the moderating influence of goal orientation. It is upon these relationships that the hypotheses of this dissertation will then be tested.

Chapter III presents the methodology of the study, and includes construct measures, the quasi-experimental research design, and analytic methods used to test the hypotheses. Chapter IV includes analysis of the study data and reports the results of the study. Chapter V summarizes the research and fully discusses the results of the study, the contributions of the findings, study limitations, avenues for future research, and the conclusion of the study.

1.7 Chapter Summary

This chapter outlined the rationale for the dissertation and the significance of the study of visible body modification. This chapter provided an explanation of the need for

this study, and defined the key constructs that will be studied. In addition, the model and study were briefly outlined.

CHAPTER II

VISIBLE BODY MODIFICATION, PERCEIVED TRUSTWORTHINESS, AND LEARNING

The purpose of this chapter is to explain the theoretical basis for this dissertation, review the literature on visible body modification (VBM) in organizational settings and develop hypotheses based on the anticipated impact of visible tattooing on perceived trustworthiness and training outcomes. As the management literature on visible body modification in general, and tattoos in particular, is sparse, this chapter will also review the historical and sociological evolution of tattoos. This chapter will then discuss perceived trustworthiness and training and learning as key constructs in the proposed model, and provide the theoretical rationale for the hypothesized relationships.

The relationships hypothesized in this chapter reflect the overarching research question of this dissertation, which is "How does a trainer's VBM affect trainees' perceptions of the trainer and the training process, as well as subsequent learning?" Answering this question contributes to the management literature, as it addresses the timely concern of whether or not employee VBM is a liability to the firm. Prior research on VBM predominantly focuses on staffing decisions, indicating that these are often made due to the assumption that employees with VBM might, in some way, hinder the organization (e.g. Brallier et al., 2011). However, VBM may have an impact on other organizational outcomes as well. For example, prior research shows that co-worker

reactions are not always favorable to VBM (Miller et al., 2009), and this could potentially impact employee motivation. If, as this dissertation argues, VBM is interpreted through a lens of social cognition and is used to evaluate a person's motivations or behaviors, any dyadic relationship in the organization potentially can be impacted.

The current literature on VBM in organizations alludes to social cognition theories when explaining manager reactions to VBM (e.g. Dale et al., 2009), but does not provide an adequate theoretical rationale for why tattoos are undesirable in the workplace. Consequently, the literature lacks a broader theoretical explanation for why those with VBM are expected to impact the organization differently than employees without VBM. This dissertation utilizes attribution theory to address how causal attributions may inform trainees' reactions to visible tattoos, which may impact learning through their effect on perceived trustworthiness. Attribution, as a type of social cognition, provides the means to assess whether or not a person with VBM should be trusted, which can then have larger implications in an organizational setting.

The research question in this dissertation focuses specifically on one human resource management process, training. By focusing on VBM's impact on a trainee's social cognition and its impact on the training process, it is possible to specifically examine whether or not VBM affects training and learning outcomes. Understanding what impact tattoos actually have in an organization is necessary for managers to make useful and strategic decisions.

2.1 Theoretical Model

To understand how differences in the physical appearance of an organizational member might influence an organizational process, this dissertation uses attribution

theory (e.g. Jones & Davis, 1965) to address the impact of visible tattoos on perceived trustworthiness (e.g. Mayer et al., 1995). The hypothesized model is presented below in figure 2.1., and will be further explained in this chapter. Using attribution theory, this dissertation seeks to establish how VBM and perceptions of trustworthiness may alter learning in a training scenario. Furthermore, individual characteristics are discussed as potential moderators of the relationship between VBM and perceived trustworthiness.

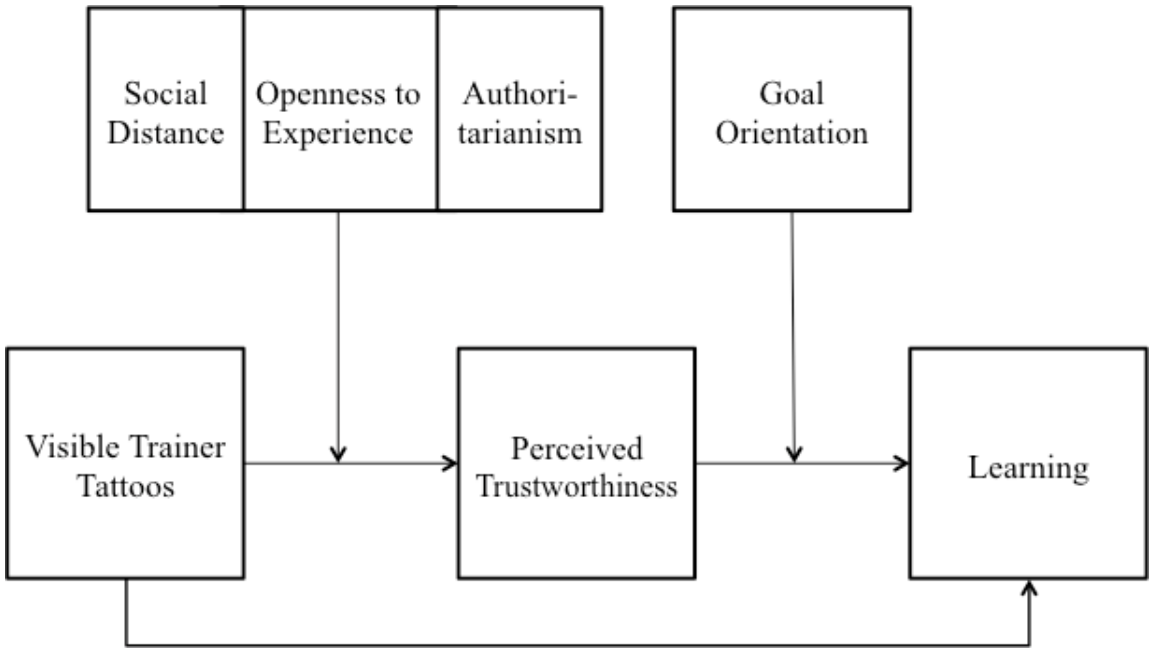

Figure 2.1 Hypothesized Model

2.2 Attribution Theory and Social Cognition

Attribution theory establishes how an observer of a behavior determines the cause of that behavior, as attributions "are individuals' beliefs about the causes of their successes and failures" (Martinko, Harvey, & Dasborough, 2011:145). While individuals can make attributions about their own outcomes (e.g. Martinko et al., 2011), they can also

engage in intergroup attribution (Islam & Hewstone, 1993) and make attributions about the behaviors of others and the social groups to which others belong (Islam & Hewstone, 1993). In their 2014 meta-analysis, Harvey, Madison, Martinko, Crook, and Crook found that attributions have a demonstrable influence on organizational outcomes. Accordingly, attributions about VBM may be an important factor in understanding outcomes related to VBM.

Attributions can be made by finding the cause of a behavior to be either internal or external to the individual engaging in the behavior (Fiske & Taylor, 1991), which is referred to as locus of causality (Harvey et al., 2014). The behavior can also be evaluated to determine whether it appears to be stable and consistent, which is referred to as stability (Harvey et al., 2014). Behaviors and attitudes that appear to be consistent across different times or situations are then expected to be more in line with the true attitudes and behaviors of the individual (Jones & Davis, 1965), and thus are viewed as internal. Internal attributions assume the behavior is caused by a characteristic of the individual, such as personality, disposition, or personal preference. External attributions, however, are made when the observer assumes the behavior is due to the situation, such as following organizational constraints or the actions of others (Harvey et al., 2014). Most often, when making attributions about the cause of a behavior, internal, rather than external, attributions are made (Fiske & Taylor, 1991).

Causal attributions, internal or external, are refined through analysis of non-common effects (Fiske & Taylor, 1991). Non-common effects are the observable differences between choices, and are often presumed to be the determining factor in how a decision was made. For instance, if two candidates with similar resumes are considered

for a job, and the only discernible difference between the two is that one has a tattoo and the other does not, an analysis of non-common effects would lead an observer to assume that the candidate chosen was picked on the basis of the employer's preference about tattoos. In this, the observer is trying to determine why a person chooses one course of action over another, and in doing so, attributes it to some "underlying disposition or preference" (Fiske & Taylor, 1991: 27).

When using non-common effects, if there are two clear choices, the observer determines what is different between the two choices, notes which option was chosen, and then concludes that the characteristic of the one chosen must be more important. When there are more than two choices, establishing the deciding difference becomes more difficult. One method used to reduce ambiguity in this situation is the evaluation of the social desirability of the options (Fiske & Taylor, 1991). This is particularly noteworthy when a behavior goes against social convention, as it is assumed that if one is willing to go against social norms to make a choice, "one can be reasonably certain that their behavior reflects their true beliefs" (Fiske & Taylor, 1991: 29). If having VBM goes against social convention as defined by Western norms (cf. Kosut, 2006), it is then likely that an observer would infer that whatever motivation led to the tattoo must then reflect the values held by the individual with the tattoo. Relying on common stereotypes of tattoos (e.g. Burgess & Clark, 2010), which will be discussed later in this chapter, could lead to attributions that assume the tattooed individual is deviant, and thus not trustworthy.

Furthermore, social cognition regarding the understanding of one's social role can also influence attributions (e.g. Islam & Hewstone, 1993). When an observer notes that

an individual is making choices or engaging in behaviors that are "out-of-role" or otherwise incongruent with a recognized role, it can be concluded that the incongruent behavior must also reflect the individual's true motivations (Fiske & Taylor, 1991). In an organization, social roles are predefined for organizational members through organizational rules and norms. If tattoos are not a commonly accepted practice in an organization, a trainer with tattoos may be seen as displaying out-of-role behavior. Again, this may lead to attributions of behaviors motivated by individual preference. If an individual chooses to go against their social role in the organization, an observer may also determine they would be likely to break with other role behaviors, again decreasing perceived trustworthiness.

In addition to determining the cause of a behavior, attribution theory suggests that through using available information, an observer also attempts to anticipate motivations and predict future behaviors of the person being observed (Fiske & Taylor, 1991). The controllability dimension of attribution (Harvey et al., 2014) considers how much control a person has over an outcome. The employee assumes both the cause and reason for why the person has a tattoo, determines how much control the person had over that situation, and then likely uses this to form expectations about that person. This includes determining what attitude that person may have about a specific topic, or even what motivations that person may have to engage in a particular behavior. Accordingly, based on attribution theory, when an employee encounters another person in the workplace with VBM, they will seek to establish a cause for why that person has a tattoo in a setting where tattoos are not commonly observed, and use that information to extrapolate additional information about that person. Due to the deviant stereotypes commonly

associated with tattoos in general society (Kosut, 2006), this may then lead to an expectation that the person with a tattoo holds deviant attitudes or engages in other deviant behaviors. Based on this information, future expectations for behavior may also include additional deviance. In this dissertation, this aspect of attribution theory is the most noteworthy, as it is expected that causal attributions made about a trainer's appearance will then be used to anticipate how the trainer might behave in the future.

It is also noted that causal attributions are made using information that is available to the observer (Fiske & Taylor, 1991) and are dependent upon what the observer chooses to focus on. Thus, if an employee focuses on a trainer's tattoos, the presence and content of the tattoos will likely inform them about the behaviors of trainer. However, if the employee places emphasis on the fact that the trainer was hired by the organization, the status of trainer may inform the observer about the behaviors of the trainer. Thus, the level of salience of VBM is important. If the VBM is salient to the trainee, then expectations of the trainer are more likely to be based stereotypes associated with the tattoos. On the other hand, if the trainer's organizational role is perceived to be more salient, expectations of the trainer are more likely to be based on characteristics of the organization.

Additionally, expectations about the individual being observed contribute to the attribution. These include population-based expectations, target based expectations, and category-based expectations (Fiske & Taylor, 1991). Population-based expectations rely on what convention says should happen. In the workplace, a population-based expectation would lead an observer to assume that a trainer will act in a manner that is congruent with how the organization wants him or her to act. Target-based expectations

rely on knowledge of the individual and anticipate that they will take a course of action similar to that which he or she has done in the past. Lastly, category-based expectations focus on the groups or categories of which an individual is a member. Consequently, it is anticipated that their behaviors will be congruent with the attitudes or behaviors of the larger category (Fiske & Taylor, 1991).

Brewer's dual process model (e.g. Brewer, 1988) can also be used to explain the causal attributions related to category-based expectations. Based on the dual process model, the more salient the category is, and the more the behavior is perceived to reflect stereotypical behavior of that category, the more likely that the observer will attribute a behavior to membership in that social category (Karasawa, 2011). Due to this process of reasoning, the social groups an individual is associated with (either in perception or in reality) are likely to significantly influence the manner in which an observer attributes the causes of their behavior and anticipates future behaviors also in-line with this causal reasoning.

2.2.1 Social Identity

As another piece of the social cognition process, social identity theory posits that in any social situation, people seek ways to classify themselves and others in order to understand the social landscape. By categorizing others based on their perceived traits, characteristics, or virtues, a person is able to group others in a social category and then determine where they fit within in those groups (Ashforth & Mael, 1989). Social identification is cognitively constructed, in that people *perceive* that they are a member of a group or that someone else is a member of that group (Turner, 1982).

Group membership based on social identity is grounded in perception and cognition, and thus is a form of psychological membership rather than actual formalized group membership (Turner, 1982). A person does not need to formally join a group. Rather, he or she only has to think that the group somehow represents him or her, or that his or her fate is at least partly influenced by the group's outcomes. As such, it is possible for a person to associate with a number of groups.

Ashforth and Mael (1989) identify four major principles of social identification. First, to identify with a group, the individual does not actually have to pursue the group's goals. Rather, it is a perception and not an actual behavior that links the individual to the group's goals. Second, in a similar vein, the individual sees the group's successes and failures as his or her own. While the individual may not work toward the group's goals, the perception that the fate of the group and the individual are linked lends to their perceived involvement. A third tenet is that while an individual may identify with a group, one does not necessarily internalize the group's values.

The third point, that identity and internalization are not the same, may play a significant role in determining how individuals view tattoos and either do or do not identify with others who have them. For instance, someone may like the look of the Harley-Davidson logo and for this reason alone get it as a tattoo (e.g. Pentina et al., 2007). Having this tattoo may lead them to identify with others who have the same or similar tattoo. At the same time, however, they may not internalize the values of those same individuals (e.g. Koch, Roberts, Armstrong, & Owen, 2010). Burgess and Clark (2010) also identify a subset of the population who do not have tattoos but are considering them, indicating that someone who does not have a tattoo may identify with

others who do, again without internalizing the same values. Furthermore, those without tattoos may also attribute a variety of reasons why another person may have a tattoo.

The fourth, and final, principle of social identification is that identification with a group is similar to identifying with an individual in that identification with a group allows a person to define who he or she is. Utilizing the group as a social referent, an individual can determine who he or she is and where he or she fits in a social space (Ashforth & Mael, 1989). The processes of social identity theory can assist a person in answering the question "Who am I?" (Ashforth & Mael, 1989), and can also serve as a method for a person to define who another person is and determine who he or she is in relation to a social identity (Ashforth & Mael, 1989). In essence, establishing where one fits in a social schema can answer both "Who am I?" and "Who am I not?" Through this, the individual accepts shared identity with some groups while rejecting others.

The distinctiveness of a group can play an important role in influencing social identity, either positively or negatively (Ashforth & Mael, 1989). When certain values or characteristics of a group stand out, they can serve as a beacon for identity. Visible body modification, due to its nature of being present and visible, may serve as a catalyst for distinctiveness, and lead to social categorizations of those who do or do not condone visible body modification. Once identified with one group or another, in-group bias may create competition between groups, and can lead to negative stereotypes about the out-group (Ashforth & Mael, 1989). Accordingly, it is likely that those who identify with a non-VBM group may develop stereotypes about dissimilar groups who have visible body modification, some of which may be negative stereotypes.

The mechanisms of social identity theory can provide a framework for understanding how perceiving and judging another's appearance can influence perceptions of trustworthiness and trust. Social identity, through self-categorization (Abrams & Hogg, 2008), provides a heuristic for making quick cognitive decisions about the acceptability or unacceptability of others based on whether they are seen as members of the in-group or the out-group. The more distinctive the differences are, the more likely a threat to the group will be perceived (Abrams & Hogg, 2008). This recognition of difference helps determine where another fits in the social landscape, and can provide information about attributes of that person, consequently aiding in decisions such as whether or not that person and can be trusted.

As differences between groups occur, negative stereotypes are developed. These can lead to prejudice, discrimination, and in-group favoritism, all of which have the potential to erode trust in the out-group (e.g. Chi, Tsai, & Tsai, 2004). This is, in part, due to in-group bias, which can lead to projecting positive attributes onto members of the in-group (Kramer, 2010) and presumably can also influence the projection of negative attributes onto out-group members. In the absence of knowledge about other people, group membership via social identity can be a useful heuristic to determine whether or not someone is trustworthy. While the term "stereotype" often carries a negative connotation, in this case they are not biases, but rather are used as "'reasonable' expectations about group members" (Abrams & Hogg, 2008: 439).

Sluss and Ashforth (2007) explain that identity operates on three levels: the individual (personal), interpersonal, and collective. At the individual level, comparison with the traits and characteristics of others can influence self-esteem and other types of

self-evaluation (Sluss & Ashforth, 2007). At this level, it may be possible that identity can allow for comparison of how trustworthy another is compared to one's self. The interpersonal level deals with relationships such as supervisor-subordinate or trainer-trainee, and it includes identity as part of one's role in this dyad. Lastly, the collective level is associated with the group, thus lending to the building of social identity for the individual as part of the group (Sluss & Ashforth, 2007).

While relational identification typifies identity based on one's role, social identity at the group level is of particular interest in this research, as characteristics of the trainer's perceived group of membership are expected to inform the trainee (either correctly or incorrectly) of trainer characteristics, attributes, and values. For instance, if a trainer were to wear jewelry with religious symbols, then the trainee would associate the trainer with that religion. Similarly, trainees are also likely to associate the stereotypical values and behaviors of members of that religion with the trainer as well.

For perceived members of some groups, visible indicators of their membership in an out-group may be viewed as a stigma (Cusack, Jack & Kavanagh, 2003). This stigma may signal that the individual is in some way "flawed, deviant, or inferior" (Cusack et al., 2003: 295) and that the individual "[deviates] from perceived social norms" (Cusack et al, 2003: 295). In an organizational setting, research on group cohesiveness suggests that when an organization member is engaging in non-normative behavior, others in that organization may see the behavior as threatening to cohesiveness, as well as threatening to the group's goals. Those who deviate from group norms tend to get more negative evaluations from others (Abrams, Marques, Bown, & Dougill, 2002). Negative evaluations about one's traits and values due to non-normative behavior and membership

in stigmatized groups may then lead to other undesirable outcomes such as the perpetuation of category-based expectations that ultimately leave an observer to anticipate that an individual's actions are deviant simply because they are perceived to be associated with a stigmatized group.

Those with visible body modification may be seen as part of the out-group if they are stigmatized for their VBM. When those with VBM are viewed as members of a stigmatized group, it is possible that the presence of VBM is salient such that attributions due to non-common effects (e.g. Fiske & Taylor, 1991) occur. In order to understand how these evaluations come to fruition and consequently play a role in the organization, it is first necessary to define VBM and explain how the history and evolution of tattoos in particular have led to stigmas and stereotypes.

2.3 Visible Body Modification

Visible body modification, as defined in chapter one, includes tattoos, piercings, or implants that are both visible and observable on an individual's body, and that do not include cosmetic tattooing (e.g. permanent eyeliner or eye shadow), two or fewer piercings per earlobe, or cosmetic procedures done to seem to be part of one's natural appearance. This definition builds upon the Swanger's (2006) definition of VBM and further refines it based upon its usage in subsequent research. Specifically, this definition includes visible tattoos, which have gained both popularity (Kosut, 2006) and attention (Bible, 2010) in recent years.

Due to the increased prevalence of tattooing, it seems likely that the number of workers with tattoos will continue to increase. It is then necessary that researchers and practitioners alike have a better understanding of how tattoos actually impact important

processes in organizations. The current literature primarily addresses two areas in which VBM affects organizations, focusing on how customers view tattoos or how co-workers or employees react to tattoos. Understanding both of these is linked to a broader understanding of how tattoos are viewed in general. For example, in a 2001 study conducted for *American Demographics*, 67% of all respondents aged 18 and older, and 63% of those aged 18-24, described tattoos as being rebellious (Whelan, 2001). In addition to rebellion, tattoos historically have been associated with criminals and social deviants as well (Kosut, 2006). As the sociological literature indicates, having and liking one's own tattoo does not preclude an individual from negatively judging another person's tattoo (Koch et al., 2010). Therefore, stereotypes (whether correct or incorrect) may also invoke concern or fear that a tattooed employee is deviant or cannot be trusted.

Toru Hashimoto (b. 1969), the mayor of Osaka, Japan, recently gained international attention by stating that he did not want city employees with visible tattoos (Yamamoto, 2012). To emphasize his point, he stated he would not hire known celebrities like Johnny Depp or Lady Gaga, as both are tattooed. Osaka employees have been asked to cover tattoos, and if they refuse to comply, they may be transferred to jobs that do not require contact with the public. As is the case in the United States, tattoos in Japan are often associated with organized crime (e.g. the Yakuza), and may be treated as socially deviant. These societal norms, whether in Japan or the United States, then disseminate into organizations.

While managers may react to this perceived deviant behavior, this does not necessarily mean that all employees or customers will. Rather, individual differences are likely to dictate how an individual perceives and interprets tattoos. While tattoos may be

offensive to some, they may be acceptable or even fashionable to others. As such, in developing a model for what influence tattoos have in organizations, it is necessary to first understand how society as a whole tends to view tattoos. More importantly, it is imperative to understand how individual differences may lead to varying degrees of accepting or rejecting those with visible tattoos.

This literature review first gives a brief history of tattoos and how they entered European and then American culture. This discussion also includes the development of social norms relating to tattoos and the motivations for choosing to be tattooed. After this, the present state of tattooing is discussed, including current demographic trends, followed by a discussion of tattoos in the workplace. Following the relationships hypothesized in this dissertation, this chapter then reviews trustworthiness and individual characteristics that may influence how tattoos influence perceived trustworthiness. Lastly, learning is discussed, with a particular emphasis on how trustworthiness can impact training and learning.

2.3.1 The Evolution of Tattoos in Western Society

Studies of VBM in the form of tattoos have only recently appeared in the management literature (e.g. Brallier et al., 2011; Burgess & Clark, 2010; Arndt & Glassman, 2012). Tattoos, however, are not a new phenomenon, as evidence suggests they date from at least 3300 BC, were present in the ancient Egyptian, Greek, and Roman civilizations (Jones, 2000), and even in Victorian Europe (Guest, 2000). For most of recorded history, tattooing was on the periphery of society, relegated to those who practiced magic, the occult or astrology (Rosencrans, 2000). This changed in the 18th century when tattooing was first introduced to Western European society (Jones, 2000),

with the manner in which it was introduced influencing the social norms that developed around it (Kosut, 2006).

The first major introduction of "exotic" tattooing in Europe occurred in 1774, when Captain James Cook returned from his exploration of Tahiti. He brought back with him a tattooed Tahitian named Omai (Fleming, 2000: 67) and introduced the word "tattoo" into the English lexicon (Jones, 2000). Previous explorers had brought similarly tattooed "savages" to England to be viewed as a curiosity for royalty and the upper class (Oettermann, 2000). However, Cook's exploits garnered greater attention to tattooing among the general population. Omai was seen as exotic, sparking curiosity among Europeans who had not previously witnessed this type of tattooing (Guest, 2000). Due to a growing fascination with Omai and his unique markings, the "renaissance" of tattooing began. New interest in tattoos emerged, and tattooing began to split into the two categories of either art or "demotic practice" (Fleming, 2000: 61).

Tattooing became popular among the European aristocracy in the late eighteenth century (Fleming, 2000), and persisted into the early Victorian era (Kosut, 2006). Tattoos became fashionable for a short time as a means to signal one's affluence (Kosut, 20060). However, while tattooing was an artistic curiosity for the elite, for most it became a marker of working class status or an indicator of social deviance (Fleming, 2000).

Indeed, tattoos entered the working class during the Victorian Era, but did so for slightly different reasons. Sailors and explorers who had sailed with Captain Cook to Tahiti also returned with tattoos (Guest, 2000). Rather than tattooing for curiosity or status, these sailors acquired tattoos to mark their travels and as a sign of fraternity

(Guest, 2000). The association of tattoos with sailors was furthered by Victorian literature, so much so that the usage of tattoos in literature often signified that the character was a sailor (Bradley, 2000: 141). Consequently, the consumption of Victorian literature perpetuated the association of tattooing with sailors, even among readers who did not otherwise have any firsthand knowledge of sailors. From this, the association between tattoos and the working class, especially those who engaged in anti-social behavior, grew (Guest, 2000).

As tattooing gained popularity with sailors and the working class, the practice also became more prevalent among criminals. The practice of convicts self-tattooing arose during the same time period, as convict transports between Britain and Australia provided the means and opportunity for tattooing. Historical records suggest that convict transport ships traveling from Britain to Australia left Britain with roughly 4 percent of the males tattooed, and arrived with 26 percent tattooed (Maxwell-Stewart & Duffield, 2000). While the tattooing of convicts dates back to ancient civilizations (Gustafson, 2000), the practice of criminals tattooing themselves in the late 1800s helped to further the association between tattoos and crime (Maxwell-Steward & Duffield, 2000). As tattooing became associated with criminals and deviants (Fleming, 2000), the general public perception shifted as the affluent lost interest in tattooing during the late 19th century (Caplan, 2000). As such, in the 1880s, tattooing became a source of inquiry for Italian and French criminologists such as Cesare Lombroso and Alaxandre Lacassagne, and their scholarly research solidified the association between tattoos and criminal behavior (Caplan, 2000).

Due to the social stigma associated with tattoos in the late 1800s, tattoos were uncommon for most of the population and thus drew attention from curious onlookers (Oetterman 2000). Sideshow men like P.T. Barnum capitalized on this fascination, and captured the public's imagination with displays of tattoos in the late 1800s. These shows featured fully tattooed men or women who told adventurous (and almost always wholly fabricated) tales of how they received their tattoos (Oettermann, 2000). The profitability of these sideshows eventually led to oversaturation of the market, which brought about the decline of the tattoo sideshow by the early 1900s. However, the initial success of these shows exposed both European and American audiences to tattoos (Oettermann, 2000).

2.3.1.1 Tattoos in American Society

Tattooing gained major attention in the United States, in part due to the traveling shows (Oettermann, 2000); therefore, the popularity of tattoos began to spread during the last part of the 19th century. This popularity was further influenced by Samuel F. O'Reilly's invention of the electric tattoo machine, which made tattooing faster and less painful. The popularity of tattooing soon led to scientific attention, and *Scientific American* published its first article on the subject in 1891 (Govenar, 2000). Interestingly, early articles published in the United States primarily focused on how tattoos could be removed (Govenar, 2000: 213). Based on these publications, it would seem that the initial interest in tattooing in the United States was fueled by a negative view of the practice. Despite this, by the early 1900s tattooing was popular among men enlisted in the US armed forces, and despite various military restrictions, patriotic tattooing persisted throughout World War I and experienced a resurgence in World War II (Govenar, 2000;

Kosut, 2006). However, after World War II, when the soldiers returned home, there are accounts of men who wanted their tattoos removed due to the negative reactions of civilians (Govenar, 2000).

The decline of tattooing in American culture in the 1950s was a product of the family-centric era, and was also influenced by the migration of the middle class out of cities where tattooing was centered. Furthermore, the 1950s saw the growth of a middle-class culture devoted to pursuing the "American Dream" and escaping blue collar and lower working-class jobs (Govenar, 2000). Since tattoos were associated with the lower class, throughout the 1950s and into the 1960s, American opinion toward tattooing was quite negative, resulting in some cities and states banning tattoos in the 1960s, on the grounds of health risk (Govenar, 2000). Despite this, tattoos persisted among marginalized groups, and even gained some renewed interest with soldiers during the Vietnam War (Govenar, 2000). When standardization of industry practices ensured safer tattooing and greatly reduced the risk of needle-borne disease, tattooing regained some legitimacy in the 1970s and 1980s (Govenar, 2000).

2.3.2 Contemporary Tattooing

In addition to the association of tattooing with social misfits and the lower class, tattooing in modern culture is also, for some, a matter of religious practice. Western culture is influenced by Christianity in a number of ways, one of which is the view and understanding of tattooing and marking of one's body. In the Judeo-Christian tradition, tattooing practices are viewed as pagan or as part of the worship of polytheistic deities (MacQuarrie, 2000). Based on this association, tattooing was forbidden in Old Testament law, and tattooing has since had a tumultuous relationship with Christianity as well

(Gustafson, 2000; MacQuarrie, 2000). As such, some of the negative connotations associated with present day tattooing may still be influenced by individual religious beliefs.

Since their introduction in western culture, tattoos have been associated with outsider groups. However, there have been periods in the past where tattooing enjoyed some cursory acceptance, such as among soldiers in times of war (Kosut, 2006). Presently, there appears to be a growing cultural acceptability in general society (Koch, Roberts, Armstrong, & Owen, 2004; Pew Research Center, 2010), particularly among younger generations. Despite growing acceptance, Burgess and Clark (2010) suggest that for most of their history, tattoos have been "strongly linked with masculine outsider groups" (Burgess & Clark, 2010: 746), so it is not surprising that perhaps the most common association of tattoos remains with more deviant groups.

2.3.2.1 Tattoos as Markers of Identity

Tattooing, throughout its history, has served as a marker of one's identity because tattoos often signified membership in a group or participation in an activity. Social identity theory explains how people classify themselves and others, based on their perceived traits, characteristics, or virtues (Ashforth & Mael, 1989). A shared identity with a group reflect a sense of shared fate, and can be a source of cohesion within a group (Turner, 1982). The first sailors who were tattooed in the eighteenth century did so as a group, to assert some fraternity and identification with the group (Guest, 2000). Similarly, the occurrence of tattooing convicts served to mark the person's identity as a convict. In more recent times, soldiers have used patriotic tattoos to indicate a national identity (Caplan, 2000), and biker gangs have used similar practices to mark affiliation.

As a whole, visible body modification and the marking of one's skin serves to establish membership in and identity with a particular group.

Body modification can also signal identification on a less participatory level. As social identity theory suggests, an individual does not actively have to participate in a group to associate with it and elicit positive feelings about being part of that group (Ashforth & Mael, 1989). For example, sports fans often identify with the wins and losses of teams with which they identify with, despite having little or no contact or influence on the actual team. Similarly, it is not unusual for individuals to get tattoos that indicate identification with a group, even if that individual has no direct association with that group.

To some extent, tattoo collectors tend fall into the category of "old-school" collectors who do integrate tattoos as part of a larger socially deviant identity, versus those who are more mainstream (Koch et al., 2010). For instance, the Harley-Davidson Motorcycle Company logo is a popular tattoo, even among those who do not actively ride a Harley-Davidson motorcycle. While the tattoo may suggest affinity for the motorcycle brand, it does not always indicate membership in any particular motorcycle group or gang. While tattoos, for some, are useful to express a sub-cultural identity (Koch et al., 2010), this identity is not taken on by all of those who have tattoos.

2.3.2.2 Motivations for Tattooing

With the exception of military tattoos, tattoos for most of the 20th century were relegated to deviant sub-culture groups, with many groups often existing on the fringes of society. However, in recent years, tattooing has become more popular in mainstream society. As the impetus for tattooing has moved beyond indicating association with a

group to expressing identification without participation, so too have the motivations for the tattoos. Rather than showing an association or allegiance to a particular group, individuals may get tattoos for myriad reasons, such as to express their individuality, as an act of asserting their independence as an adult (to get a tattoo without parental consent, the recipient must be of legal age), or even as a type of an art collection (Vail, 1998). The aesthetic appeal of tattoos has grown to such an extent that it is increasingly regarded as a legitimate art form (Kosut, 2006).

While it is possible to regard tattooing solely as a means for identification with a particular group, the examination of recent trends in body art of college age students (Pew Research Center, 2010) suggests that the reasons for tattooing are much more varied. While previous scholarly attempts to understand the motivations of tattooing have looked at criminology and deviance, the marketing literature has started to conceptualize tattooing as a consumption behavior as well (e.g. Pentina et al., 2007). Like other consumer decisions, tattooing can be framed as a consumer choosing to permanently alter their appearance. The extant marketing literature seeks to explain what motivates this behavior, and perhaps, more interestingly what has led to an increase in this behavior in recent years (e.g. Pentina et al., 2007).

This research has suggested that motivations for tattooing include constructing one's identity and expressing of one's individuality (Petina et al., 2007). Tattoos that construct identity may be acquired to make a specific statement or to memorialize an event. Similarly, some may collect tattoos as pieces of art while others may regard the act of aquiring a tattoo as a means to express themselves. Other reasons cited included tattoos received as gifts, and those done as an act of impulse or spontaneity. The authors

point out that these last two, in particular, are associated more with an experience than with the actual tattoo, and may lead to eventual remorse or even removal of the tattoo (Pentina et al., 2007).

In their research on the motivation for acquiring tattoos, Pentina and colleagues (2007) found that those without tattoos also rejected them based on meaning on the grounds that tattoos take away individuality. This is an interesting discovery, as the implications of this may be two-fold. First, tattooing among the population studied (college students) may be so ubiquitous that tattoos are not seen as rare or unique in meaning. That is, negative attitudes about tattooing may also reflect a sentiment that tattoos take away from "uniqueness" because those who get tattoos are just following a trend (Pentina et al., 2007). Furthermore, students who rejected tattoos acknowledged that there are stereotypes associated with tattoos (Pentina et al., 2007). Second, while the researchers do not specify, it is quite possible that old stereotypes are now being mixed with new stereotypes of trend-following. Whereas tattoos in deviant subcultures are acquired to denote membership with a group, tattoos in younger populations such as college students may be similarly motivated, even if the groups they identify with and belong to may not be as permanent (e.g. student organizations) (Pentina et al., 2007). As a whole, as the rationale for getting a tattoo expands, the number of those with tattoos also seems to grow.

2.3.2.3 Demographic Trends

The change in motivation for obtaining tattoos has likely contributed to the recent increase in the percentage of the general population who report having them. A 2010 Pew Research Center report shows that 38% of those born between 1980 and 1992 (aged

18-29) have at least one tattoo, as does 32% of those categorized as Gen X (30-45), 15% of Baby Boomers (46-64), and 6% of those over 65. Furthermore, the 18-29 year olds who were tattooed had more tattoos per person than those over 30. Roughly half (47%) of the tattooed respondents over the age 30 have only one tattoo, while only 31% in the 18-29 age group reported just one (Pew Research Center, 2010). This indicates that not only is tattooing more prevalent for younger respondents, but those who have tattoos on average have a greater number. The same study found that 70% of 18-29 year olds and 73% of those 30 or older reported that their tattoos were not visible.

The younger demographic group is markedly different as to how they view tattooing, as compared to older generations. A 2008 survey of college students across 14 U.S. universities reported that 40.5% of respondents had some form of body modification, either a tattoo or non-earlobe piercing (Lipscomb et al., 2008). Even undergraduates who reported that they were religious did not overwhelmingly reject tattoos (Koch et al., 2004). As a whole, undergraduate students in particular seem to have less negative attitudes toward tattoos than do businesspeople (Dale et al., 2009). Geographic location, likely tied to the culture of a region, also influences the perceived acceptability of tattooing (Dale et al., 2009).

A number of factors, of course, are likely to contribute to this. For instance, those who have body modification were more inclined to be accepting of it on others. Due to the increasing visibility and prevalence of tattooing in contemporary culture, as exemplified by a number of celebrities with tattoos, public perceptions of tattoos may not be as clear-cut as they once were. Rather, the notion of tattooed versus not-tattooed may be too limited of an approach, as the content and nature of tattoos vary. Of particular

note is the growth of tattoos in the middle class, which has driven a trend for "less offensive and more personal" styles of tattooing (Burgess & Clark, 2010: 748). Burgess and Clark (2010) examine this difference, and in their research on perceptions of tattoos, found that respondents clearly distinguished between two categories the researchers termed "cute" (e.g. dolphins or suns) and "tribal" (e.g. Celtic patterns or barbed wire) tattoos. Moreover, subjects exposed to job applicants with tribal tattoos rated them more negatively than did subjects exposed to job applicants with cute tattoos (Burgess & Clark, 2010).

Where people place their tattoos is also of significance, as it impacts whether or not the tattoo is readily visible to others. One study found that the three most common locations are upper arms, shoulders, and lower legs (Wohlrab et al., 2007). For the most part, these tattoos are not likely to be visible in most business attire. However, some upper arm tattoos may be visible with short sleeves, and lower leg tattoos may also be visible, especially for women. Roughly four percent of respondents reported tattoos on their face or neck, and slightly more than 10 percent reported tattoos on their lower arms and hands, resulting in nearly 15 percent of the tattooed respondents reporting potentially visible tattoos (Wohlrab et al., 2007). These findings suggest that, combined with the overall increase in tattooing, the overall number of visible tattoos is increasing.

Despite the demographic shift that suggests more people have and are getting tattoos, this figure may not perfectly correspond with an increase in acceptance of tattoos on others. Rather, the practice of tattooing has increased faster than the actual social acceptability of tattooing. Pentina and colleagues cite a 2005 U.S. News report on the tattoo industry, stating that at that time there were 15,000 tattoo parlors, with a new one

opening every day (2007). A 2009 Pew Research survey asked if the increase in tattoos in society was a good thing. A total of 40% of respondents thought the increase in people getting tattoos was a change for the worse. Eight percent of those surveyed did not know, and 45% reported no change. Only 7% of respondents thought the increase in tattooing was a change for the better. To put this in cultural perspective, compared to other questions asked in the survey about increased surveillance, genetic testing, and societal acceptance of gays and lesbians, all of these issues received higher approval rates than tattooing (Pew Research Center, 2009). These numbers suggest that while the number of people with tattoos may increase, they are not necessarily becoming acceptable or normal in general society. Rather, they still seem to carry a stigma.

2.3.3 Tattoos as Deviant Behavior in the Workplace

As is discussed above, recent studies indicate employers are hesitant to accept employees with visible tattoos. While in any specific circumstance an employer might be reticent to completely articulate why these tattoos are undesirable, the overarching theme in the extant research (e.g. Burgess & Clark, 2010) tends to be that tattoos are socially deviant. The causes and consequences of deviant behavior in organizations is of legitimate concern (e.g. Robinson & Bennett, 1995), and in a similar vein, body modification maybe be viewed as a deviant societal behavior that crosses into the workplace.

Deviant behavior in organizations is defined as a "voluntary behavior that violates significant organizational norms and in so doing threatens the well-being of an organization, its members, or both" (Robinson & Bennett, 1995: 556). Based on this definition, body modification does not strictly fall in the realm of organizationally

deviant behavior, as it does not actually occur in the workplace, nor does it directly threaten the well-being organization or its members. However, the prevailing view in general society is that tattooing is a socially deviant behavior (Kosut, 2006). This attitude is then often carried into organizations, potentially leading to adverse hiring decisions, likely due to the association of tattooing with other deviant behavior (e.g. Brallier et al., 2011; Swanger, 2006.)

Managers may make the association between tattoos and deviant behavior, but this association is not necessarily accurate. While societal perceptions have grown out of the history and nature of tattooing, contemporary tattooing is arguably different than that of the past that was relegated to sailors, outlaws, and convicts. Rather, the reasons for modern tattooing are more varied, and the motivations for the modification of one's body now go beyond the stereotypical rebellious or criminal image of the past (Kosut, 2006). Those with body modification are often viewed with suspicion and are assumed to be deviants or even criminals (Brallier et al., 2011), and as such, an assumption addressed in the extant business literature is that many employers seem reluctant to hire and employ individuals with VBM (Legal Alert for Supervisors, 2011).

2.3.4 Reactions to Tattoos in the Workplace

The recent increase of visible body modification has had an impact on staffing decisions as a whole, as evidenced by a growing number of legal issues faced by employers in the last decade (Bible, 2010). In many instances, these lawsuits highlight the need for employers to understand how visible tattoos or visible piercings actually impact the workplace. If visible body modification truly does limit an employee's ability

to contribute to organizational goals, this provides a much stronger argument for employers to make adverse staffing decisions against employees with VBM.

However, employers are generally well within their legal rights to refuse to employ those with visible tattoos (2010), although this is not necessarily defensible from a strategic viewpoint. Despite employers' preferences to not hire modified individuals, demographic trends indicate that a growing number of undergraduates and recent graduates are getting tattooed (Elzweig & Peeples, 2011), and as a whole, the percentage of job applicants with some type of VBM is likely increasing. Accordingly, it is likely that as the number of applicants with VBM increases, organizations may need to further examine exactly how having employees with visible tattoos can impact their business.

One such consideration may be the type or placement of tattoos. Different tattoos may communicate different messages, and in turn, those messages affect perceptions about and ratings of an individual (Burgess & Clark, 2010). The type, size, number, and placement of tattoos may all influence perceptions. Burgess Clark (2010) found subjects exposed to job applicants with "tribal" tattoos rated them more negatively than did subjects exposed to job applicants with "cute" tattoos (Burgess & Clark, 2010). The researchers also noted that men judged women with tattoos more harshly. This is a finding that is documented in a number of prior studies (Burgess & Clark, 2010). Only one study, conducted with applicants in the restaurant service industry, did not find a significant difference between male and female applicants (Brallier et al., 2011).

As such, the type and content of a tattoo may have a significant impact on how people may react to them in the workplace as well. Data from one study suggest that individuals with cute tattoos are judged similarly to those with no tattoo at all (Burgess &

Clark, 2010). Furthermore, a surprising result was that the type of job applied for did not seem to have an impact on how applicants were judged (Burgess & Clark, 2010). In a study of applicants for a restaurant server position, employers preferred applicants without body modification. Interestingly, however, 70% of restaurant managers still indicated they would hire applicants with visible body modification (Brallier et al., 2011). This finding suggests that there may be circumstances where businesses are willing to hire those with visible tattoos.

Surveys about visible tattoos in the workplace suggest that most employers would prefer to not hire those with visible body modification, but certainly there are circumstances where some employers are and will be willing to hire applicants with visible tattoos (Brallier et al. 2011). Furthermore, as the population born after 1980 enters the workforce, the number of applicants with tattoos is likely to increase, furthering the likelihood that persons with VBM will be hired. As such, it is necessary that the literature on VBM in the workplace, and tattooing in particular, move forward to consider what outcomes may be associated with hiring tattooed individuals. One primary concern is what impact VBM will have on others within the organization. There is some empirical support for the fact that employees react to VBM, at least in part, based on the type of interaction they must have, and the types of rewards and responsibilities that are shared (Miller et al., 2009). From this, it is expected that employee behavior may change based on employee reactions, which in turn can impact some organizational processes. While the nature of a situation may influence how employees react to those with tattoos, in addition to other factors, it is likely that individual differences based on personality and experience may also play a significant role in determining how tattoos impact an

organization. Thus, returning to the question as to why employers may not prefer those with VBM, the answer may lie, in part, with how other employees react to VBM like visible tattoos.

2.4 Trustworthiness

As VBM and tattooing tend to be associated with deviant behaviors, a likely concern employers and coworkers have about those with visible tattooing is whether or not they can or should be trusted. Mayer, Davis, and Schoorman define trust as the "willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (1995: 712). In instances where visible tattoos are attributed to membership in a stigmatized or deviant group, it is plausible that visible tattoos could call the trustworthiness of a trainer into question.

Trustworthiness involves the assessment of whether or not an individual should place trust in someone, based on the assessment of how likely the other party is to betray that trust (McAllister, 1995). This includes both emotional and cognitive assessments of whether trust should be placed in another (McAllister, 1995), particularly as one determines whether or not another has "the motivation (or lack thereof) to lie" (Mayer et al., 1995: 716) based on perceptions of things such as ability, benevolence, or integrity (McAllister, 1995). It is anticipated that these assessments will be largely based on social cognition involving attributions about motivations for the trainer's behavior. With matters of trust between two people, a trustor and a trustee, the level of anticipated trustworthiness is perceived by the trustor as an indicator of how much trust should be

placed in the trustee. Based on the perception of what the trustee has to lose or gain by deceiving the trustor, a level of trustworthiness can be anticipated.

In this trust relationship, the two key approaches to how trust may be established are affect-based or cognition-based trust (McAllister, 1995). The first, affect-based trust, requires an emotional element to establish trust. Affect-based trust can be developed out of relationships where there is perceived care and concern between the two parties (McAllister, 1995). Cognition-based trust, rather than relying on emotion, involves deciding who to trust through a series of cognitive decisions about the trustworthiness of the party in question (McAllister, 1995). It is this type of decision-making that is likely to be of particular importance when determining trustworthiness in a situation where the two parties have no prior knowledge of each other.

Interaction frequency is an antecedent of affective trust (McAllister, 1995), and thus new relationships are likely to lack an affective element compared to those relationships which have a longer history and greater interaction. In this instance, attributions for observed behaviors (e.g. having visible tattoos) may play an important role in establishing cognition based trust. In new dyadic relationships, cognitive decisions may inform perceptions of trustworthiness. It is only later that we expect these cognition-based appraisals to inform affect-based trust (McAllister, 1995). When trust is based in cognition, it is expected that trust will be influenced by the information that is available and most salient.

Trustworthiness can be further evaluated through cognition by considering the three factors of the trustee's *ability, benevolence, and integrity* (Mayer et al., 1995). Ability assumes some type of competency in a particular area in question (Mayer et al.,

1995). Ability, in part, contributes to the dynamic nature of trust, as an individual may be skilled in one area, but lack any ability in another. Based on the area of competency in question, as well as the situation, ability changes and accordingly so does trustworthiness such that as ability decreases, so will trustworthiness (Mayer et al., 1995).

The second aspect of trustworthiness, benevolence, takes into account the level of the trustee's desire to do good for the trustor, without reward. In terms of defining trustworthiness as determining the propensity to lie, increased benevolence would suggest that the propensity to lie would decrease, as a benevolent trustee would act in accordance with the interests of the trustor (Mayer et al., 1995). Lastly, integrity in a trust relationship is described by Mayer and colleagues as "the trustor's perception that the trustee adheres to a set of principles that the trustor finds acceptable" (1995: 719). As these principles align, it would follow that trustworthiness would increase. In the three-factor model, integrity is viewed as the most important factor of the three early in a dyadic relationship, as initially it is anticipated that the trustor has limited knowledge of the trustee, but can gather information about the trustee's integrity from third parties. The same could also be established about ability. Later, as the relationship persists and the trustor is able to gain more experience and first-hand knowledge, they can then better assess benevolence. Accordingly, the importance of benevolence increases as the relationship persists and develops (Mayer et al., 1995). In terms of evaluating these three factors, time plays an important role in establishing the extent to which each of these informs trustworthiness. While in short time spans integrity and benevolence may be highly correlated, studies have indicated that these do indeed change over time (Schoorman, Mayer, & Davis, 2007).

It is important to note that together, these three factors comprise trustworthiness. Mayer, Davis, and Schoorman (1995) emphasize that one or two without the others does not necessarily constitute trustworthiness. Rather, the lack of just one is enough to erode the perception of trustworthiness. Furthermore, trustworthiness is not a yes/no variable, but rather exists on a continuum (Mayer et al., 1995).

While trustworthiness is generally uncertain in any new dyad, these three elements come together to inform a trustor of the amount of risk they may have to undertake. It is conceivable that a number of factors may influence ability, benevolence, and integrity. As was previously discussed, the situation can impact perceptions of trustworthiness, particularly with assessments of ability (Mayer et al., 1995). For instance, a person may trust that, given the appropriate tools, a mechanic can fix a car. However, this same mechanic, without any of the proper tools, would greatly lack the ability to make the same repairs. Certainly, even with the correct and proper tools for the job, a person would not want this same mechanic to do his or her dental work. In short, an individual's ability goes only as far as the situation is conducive to their doing a task, and as such, perceived ability can influence the level of trustworthiness.

In a training scenario, the ability of a trainer is likely expected to be high. From the perspective of the person being trained, he or she likely will place trust in the trainer if the trainer's knowledge is specific to the material being taught. For instance, if a nurse is teaching CPR, he or she will likely be trusted because they possess the credentials that indicate they do indeed know how to do CPR. Furthermore, it is likely that from the trainee's perspective, the trainer's ability is high because 1) the trainee, not knowing the material, does not have another standard by which to measure the trainer's ability, and 2)

the organization deemed the trainer capable of conducting the training, so the trainer must be knowledgeable and able. From this, while ability will inform trustworthiness in a training situation, because of the situation and the context of the trustor-trustee relationship, prior to the training, ability is likely to be assessed as adequate or even high.

Second, benevolence in a training situation is also likely to be high. Again, because of the context of the training, and due to the fact that the organization has chosen the trainer, expectations of benevolence will be shaped accordingly. In line with the dual process model (Brewer, 1988), this is expected to be particularly pronounced when the trainer's role in the organization is more salient than his or her appearance. Furthermore, perceptions of benevolence in a training situation will be influenced by how much the trainee thinks the trainer desires for him or her to do well. A focus on in-role behaviors will then lead to attributions that find the trainer in congruence with expectations (e.g. Fiske & Taylor, 1991). It could be argued that because the trainer is employed by the organization, there is a reward, thus eliminating benevolence. However, ultimately, the trainer is not rewarded for the long-term performance of an employee, so benevolence is still a consideration.

In a training situation, trustworthiness is most likely to vary based on the perception of integrity. While the fact that the organization chose the trainer reflects heavily on his or her ability, and to some extent, benevolence, the same conclusions may not always be drawn for integrity. Certainly, there is some level of integrity, for the trainer is trusted by the organization. However, in the trust relationship between the trainer and the trainee, perceptions of integrity may vary.

As previously stated, integrity is arguably the most important element of trustworthiness early in a trust relationship. Even if ability and benevolence are somewhat established by the training context, integrity is influenced not only by the situation, but also by characteristics of the trainer. As defined, integrity deals with adherences to a set of accepted principles. Therefore, as each trainee has a different and unique set of principles, perceptions of integrity will vary. For example, if a trainee espouses principles that include the belief that foul language should never be used and then overhears the trainer using foul language, the trainee may question the trainer's integrity, which can ultimately erode trust. Attribution theory would further suggest that individual differences in behavior may draw attention to these differences, as they serve as non-common effects (Fiske & Taylor, 1991).

Perceptions of integrity can be established quickly at the beginning of a relationship. When limited information is available, attributions derived from visible body modification may play an important role in the forming of these perceptions. VBM can serve as an immediate source of information to establish whether or not a person shares similar principles and values as the observer, as well as predict how the person being observed may behave in the future. Due to the stigmatized nature of visible body modification and its association with socially deviant behaviors, often tattoos and piercings are incongruous with the principles of many members of society and thus may cause them to view those with VBM as out-group members. Even among those most likely to have tattoos (i.e. those born after 1980) there is still an awareness of the norms of general society. Furthermore, the majority of undergraduates are not tattooed (Pew Research Center, 2010), likely for a number of reasons (Pentina et al., 2007) including

awareness of and adherence to social norms. As such, it is expected that those who hold principles incongruous with body modification will perceive a person with tattoos or piercings as having less integrity.

As social identity theory (Ashforth & Mael, 1989) would suggest, those who do not identify with visible body modification might view those with VBM as "other", even further establishing the perception that their principles are not the same. This can then lead to category-based attributions where the trainee assumes that the trainer is motivated by values held by their perceived category. Thus, in a training situation, it is expected that trainers with visible body modification will be perceived by trainees as being less trustworthy due to a perception of decreased integrity if the trainee views visible body modification to be an indicator of socially deviant or otherwise unacceptable behavior. This perception of decreased integrity is expected due to the reactions and stereotypes commonly associated with VBM (Kosut, 2006).

Due to the stigmatized and counter-normative nature of visible tattoos in society, this perception is carried into the workplace and accordingly is expected to have a negative impact on co-worker reactions. Accordingly, stereotypes about VBM can inform attributions such that an observer attributes a trainer's VBM to values congruent with these stereotypes, and expects the trainer to continue to behave in other ways also associated with these stereotypes. Accordingly,

H1: Visible trainer tattoos will have a negative impact on perceived trustworthiness such that the presence of visible tattoos will lead to decreased perceived trustworthiness.

2.5 Individual Differences

The lens through which individuals view their world is influenced by a number of things, including their personality and prior experiences. Specifically, when faced with new or uncertain situations, they engage in sense making (Abrams & Hogg, 2008) and often rely on heuristics such as causal attributions (Fiske & Taylor, 1991) that reflect these individual differences. The use of these type of heuristics can be useful in making quick decisions and determining if another is a member of the in-group or out-group (Abrams & Hogg, 2008). Due to the fact that tattoos are often viewed as socially deviant, it is expected that the understanding of social norms will be a salient means by which to evaluate those with tattoos and evaluate their motivations. This is not completely unfounded, as tattooing in the past has often served to signal one's membership or participation with certain social categories or groups (Kosut, 2006).

For perceived members of some groups, visible indicators of their membership in an out-group may be viewed as a stigma (Cusack, Jack & Kavanagh, 2003); further, this stigma may signal that the individual is in some way "flawed, deviant, or inferior" (Cusack et al., 2003: 295) and may indicate that individual "[deviates] from perceived social norms" (Cusack et al, 2003: 295). When this perception informs causal attributions, it may lead to an assumption that the individual will continue to behave in ways seen as consistent with the stigma. In an organizational setting, research on group cohesiveness suggests that when an organization member is engaging in non-normative behavior (such as a trainer having visible tattoos) others in that organization may see the behavior as threatening to cohesiveness and the group's goals. Those who deviate from group norms tend to get more negative evaluations from others (Abrams, Marques,

Bown, & Dougill, 2002). Negative evaluations about one's traits and values due to non-normative behavior and membership in stigmatized groups may then lead to expectations of other undesirable outcomes. Deviation from group norms ties back into the evaluation of non-common effects. As an individual is viewed as straying from the group's expectations of appropriate behaviors, attributions that this behavior is caused by some flaw may lead to other expectations of future behaviors that will also be incongruent with the group's norms.

Marketing studies on VBM have considered how tattoos might impact customers, and hiring managers have expressed their concern for VBM (e.g. Bible, 2010), citing the fact that they are concerned with the image a tattooed individual may project. One alternative an employer may pursue, if hiring those with VBM, is to place them in non-front line positions, thus reducing direct customer contact. As such, there may be situations more conducive to hiring those with VBM, namely, positions not in contact with the public.

Within this exchange relationship, perceptions of trustworthiness are expected to be influenced by individual characteristics of the trainee as well, since individual differences such as personality and experience alter how one perceives the world. For instance, prior experience with (or the lack of prior experience with) tattoos is likely to inform how subsequent tattoos are perceived. The historical nature of tattoos as being markers of deviant behavior may lead employers to assume tattooed applicants are not as trustworthy. Furthermore, employees may also anticipate that their workers would not be able to trust a fellow employee with VBM. However, the extent to which employers

react is expected to vary. As such, this dissertation examines three likely individual differences that may moderate the relationship of VBM and perceived trustworthiness.

2.5.1 Individual Differences as Moderating Variables

Based on the extant literature (e.g. Brallier et al., 2011), it appears that employers expect that the prevailing social norms will dictate not only how a tattooed employee may behave (i.e. deviantly), but also how other employees will react to that employee (Bible, 2010). However, this overlooks the important consideration that individual personality likely plays a significant role in how a person perceives and responds to visible tattoos. As this dissertation argues, the broad influence of social norms is reflected in whether or not a trainee socially identifies with a tattooed trainer, which in turn has a direct impact on the perceived trustworthiness of the trainer. However, it is expected that because causal attributions manifest in dyadic relationships, individual personality traits may moderate the extent to which trustworthiness is perceived. As Mayer and colleagues (1995) suggest, characteristics of the trustor play an important role in the model of trust. In the next section, these individual differences and personality traits are discussed and hypotheses are developed. Control variables are addressed in Chapter III.

2.5.2 Social Distance

The degree to which one person finds another to be similar and socially acceptable is perceived as social distance (i.e. St-James, de Man, & Stout, 2006). Social distance provides a means by which to approximate a level of comfort a person has with a different "other." This is done by defining social space as a function of how willing one is to socialize with another (e.g. coworker, neighbor, close friend) and determining how

close that person is to the in-group. For issues of visible tattooing in the workplace, the amount of social distance an employee perceives between himself or herself and a visibly tattooed trainer is likely to be indicative of how socially similar or dissimilar they find the trainer to be, based on visibly observable characteristics.

One's appearance can influence how others perceive and socially categorize him or her. How similar or how different an individual appears can impact the degree to which another perceives that other attributes, such as social standing, are also alike (St-James et al., 2006). This categorization is used to determine where others fit in the social landscape, and then to determine whether they fit in the in-group or the out-group (Ashforth & Mael, 1989). Something as simple as the style or type of one's clothing can impact this perception. In one study on the style of dress of college students, students who wore a certain style of clothing were associated with a particular out-group based on appearance, whether or not they actually were members of that group. Furthermore, respondents placed themselves socially apart from those individuals based on their perceived group affiliation (St-James et al., 2006). As a result, something as mutable as physical appearance has the ability to dictate how other attributes are perceived. Interestingly, however, this perception may not be accurate. The same study found that even those who dressed the same as a member of a stigmatized out-group still perceived a difference between how they dressed and how the out-group dressed.

Similarly, perceptions of a trainer with visible body modification may identify him or her as part of a historically stigmatized deviant group, whether or not that person is actually a member of a deviant group. Based on the results found in the style of dress study (St-James et al., 2006), even those who have tattoos may still categorize others as

part of an out-group rather than as part of the same group they belong to. In other words, it is possible for an individual with VBM to not socially identify with another person who has visible tattoos. Rather, they may actually perceive a large distance between who they are and who they perceive the other person to be based on VBM. Perceived social distance influences casual attributions by drawing attention to a level of perceived similarity or dissimilarity.

While social distance as a measure of perceived similarity provides insight as to how accepting a respondent is of another person, it may be particularly useful in explaining why some employees react strongly to visible tattoos and make attributions based on them while others do not. Social distance, as developed by Bogardus, measures closeness based on perceived differences (Parrillo & Donoghue, 2005). This makes it possible to determine how socially alike or different one person finds another, and scholars have used social distance scales to assess a number of social phenomena involving dissimilar groups (e.g Tumasjan, Strobel, & Welpe, 2011).

Social distance is expected to play an important role in influencing the perceived trustworthiness of a trainer with visible tattoos. If, as the research of St-James and colleagues (2006) suggests, a pronounced social distance exists between two people who visually appear to similar, visible tattoos may lead to categorizing trainers as being members of a stigmatized group. Consequently, this categorization may influence other perceptions. Particularly, the level of perceived trustworthiness may be moderated by social distance. As previously discussed, trustworthiness is comprised of ability, benevolence, and integrity (Mayer et al., 1995). It is expected that social distance will moderate the relationship between visible tattoos and trustworthiness, as increased social

distance will likely lead the observer to the perception that they not only have less in common with the trainer, but also that the trainer is the member of an undesirable and stigmatized group. Causal attributions are expected to be influenced social distance. When social distance is low, it is expected that attributions will be closer to the type of attributions one makes about him or herself. That is, the cause of any undesirable behavior is more likely to be seen as a product of the situation, and not as a "flaw" of the individual (Fiske & Taylor, 1991). Similarly, as social distance increases, attributions will focus more on the individual, and will be used to anticipate their motivations in the future (Fiske & Taylor, 1991). A smaller social distance is expected to produce more external attributions, while larger social distances produce more internal attributions. Consequently, this leads to the likelihood that attributions associated with VBM will change with social distance. As the social distance increases or decreases between the trainee and the trainer, it is expected that perceived trustworthiness will be influenced as well.

H2: Social distance will moderate the relationship between visible tattoos and perceived trustworthiness. As perceived social distance from those with visible tattoos increases, the anticipated negative relationship between visible tattoos and perceived trustworthiness will strengthen.

2.5.3 Openness to Experience

The "Big Five" personality traits provide a useful explanation of individual differences and are frequently used to assess personality in organizational research (Mount & Barrick, 1998). One of these five personality traits, openness to experience, is

a core personality trait that has been utilized to examine a number of organizational phenomena.

Openness to experience is characterized as being "curious, broadminded, cultured, and intelligent" (Barrick & Mount, 1991: 6), "original, imaginative, [having] broad interest, and daring" (McCrae & Costa, 1987: 82), and individuals with these traits can be described as artistic, intellectually curious, nonconforming, or insightful (Barrick, Mount, & Gupta, 2003). In some circumstances, the characteristics of those high in openness to experience are also very similar to those who are seen as creative (McCrae, 1987). Due to these characteristics, individuals who are high in openness to experience are expected to have a positive view of learning both in general and in specific situations, and will actively and willingly engage in training (Barrick & Mount, 1991).

Openness to experience is expected to influence and moderate the relationship between VBM and trustworthiness for two key reasons. First, it is expected that those who are high in openness to experience will be more likely to accept with those with VBM or are at least expected to be less likely to reject them. When attributions are made, this willingness to accept VBM is expected to be driven by the fact that tattooing, particularly with the younger generation, is often seen as an expression of individuality or creativity. In this vein, it is expected that those who are higher in openness to experience, and, similarly, creativity (McCrae, 1987), will be more inclined to associate with those with visible tattoos.

Second, those who are higher in openness to experience may be interested in learning more about an individual with VBM, due to curiosity. Being curious and broad minded may allow those high in openness to experience to be willing to work with

someone with VBM, even if they personally do not have any interest in or affinity for tattoos, or even if they see the person with VBM as being part of an out-group. Homan and colleagues suggest that this curiosity, along with other attributes of openness to experience such as adaptability, liking novelty, and having fluid political and religious beliefs can all contribute to a person being more accepting of diversity in work situations (Homan, Hollenbeck, Humphrey, van Knippenberg, Ilgen, & van Kleef, 2008). This acceptance of diversity and willingness to learn about the individual, in turn, may increase trustworthiness as the trainee begins to learn more about the trainer, as increased familiarity can increase perceived trustworthiness. Research on diversity in teams suggests that openness to experience alters how much individuals are attracted to out-group members (Homan et al., 2008). Furthermore, examination of the five factor model through meta-analysis found that openness to experience predicts training proficiency, which can enhance the ability to "learn more" (Mount & Barrick, 1998: 851). Combined, the propensity to be more accepting of out-group members and the willingness to engage in learning are expected to decrease any negative impact of VBM on perceived trustworthiness of a trainer.

H3: Openness to experience will moderate the relationship between visible tattoos and perceived trustworthiness. As openness to experience increases, the anticipated negative relationship between visible tattoos and perceived trustworthiness will weaken.

2.5.4 Authoritarianism

An additional personality trait expected to influence the relationship between VBM and perceived trustworthiness is authoritarianism, which has three key

manifestations. First, it involves "a high degree of submission to the authorities" one views as being legitimate in society. Second, it involves "a general aggressiveness …that is perceived to be sanctioned by established authorities" (Altemeyer, 1996: 6). This is not necessarily physical aggression, but rather could involve a number of reactions, often meant to enforce or maintain the establishment (Altemeyer, 1996). Lastly, authoritarianism involves conventionalism, which is "a high degree of adherence to the social conventions that are perceived to be endorsed by society and its established authorities" (Altemeyer, 1996: 6). It is noteworthy that those high on the authoritarian scale tend to trust and defer to authorities. However, this is not the only aspect of the personality trait. In the context of this dissertation, of particular interest is the manner by which high authoritarians respond to and seek to uphold societal norms. Returning to the influence of social identity, the authoritarian personality type is particularly tied to this concept, as social identity allows for in-group/out-group categorizations (Ashforth & Mael, 1989). Through social identity, an "us" and "them" is delineated. For those high on authoritarianism, this distinction is likely particularly useful as they seek to determine who shares norms and are thus part of legitimate society, as opposed to those who deviate from social conventions. From this, causal attributions can be made based on this distinction.

According to Altemeyer, authoritarians commonly find conflict with those they see as unconventional or as social deviants, particularly if it seems that social convention sanctions their disapproval (Altemeyer, 1996). Altemeyer (1996) further points out that these viewpoints are not immutable, but that authoritarians in particular may be resistant to change. As visible body modification in the form of tattoos and piercings are generally

stigmatized in the general population and exist outside the confines of sanctioned social convention, it is then expected that authoritarians, in particular, will disapprove of them, and that this will be consistent across ranges in age. Furthermore, due to their inclination to actively oppose that which they find counter-normative, it is expected that authoritarians will have particularly negative reactions to trainers who have visible body modifications, as they are part of a socially deviant group. Attribution theory suggests that these reactions can lead to the expectation that a trainer is making decisions based on deviant motives. In terms of social identification, authoritarians are expected not to identify with those they perceive as deviating from social norms. The perception of deviant motives, along with a lack of identification with the trainer will ultimately lead to external attributions that focus on VBM as the non-common effect (e.g. Fiske & Taylor, 1991). Accordingly, for an individual high in authoritarianism, the perception of socially deviant motives will erode trust, even if the trainer otherwise meets criteria for trustworthiness.

H4: Authoritarianism will moderate the relationship between visible tattoos and perceived trustworthiness. As authoritarianism increases, the anticipated negative relationship between visible tattoos and perceived trustworthiness will strengthen.

2.6 Training and Learning

As discussed before, visible tattoos are expected to influence the perception of perceived trustworthiness. This influence of VBM on trustworthiness has the potential to provide some insight on how tattoos can impact employee performance. One way to

assess this is through learning that occurs in a training context. This dissertation focuses specifically on learning as a measure of training effectiveness.

With the hypothesized model, it is first necessary to ascertain how perceived trustworthiness may impact learning through the training process. In the current proposed model, the question asked is what impact visible body modification has on perceived trustworthiness and learning in a context where a trainee is being trained by someone with visible tattoos. In this scenario, the VBM of the trainer is expected to have a direct effect on training outputs, specifically learning. To understand how this may occur, first it must be determined how VBM of a trainer can impact training outcomes.

By focusing on training, and learning in particular, it is possible to further explore how VBM can influence the organization in areas other than customer service. Specifically, this dissertation focuses on employee learning as part of what constitutes effective employee training. This question is important to the organization, as all employees engage in some type of training (Mathieu, Tannenbaum, & Salas, 1992), and this training is ultimately expected to successfully transfer and positively impact employee performance (e.g. Cheng & Hampson, 2008).

Training effectiveness can be evaluated on four levels (Kirkpatrick, 1977). *Reaction* establishes how those being trained respond to the training, while *learning* establishes what knowledge, skills, or abilities the trainee has acquired. *Behavior* establishes that the training actually influences work behaviors, and the last, *results*, establishes that measurable changes in terms of improvement have occurred (Kirkpatrick, 1977). Of these four, reaction and learning are observable upon completion of training

and will ideally influence the transfer of training and subsequent behaviors and results (Mathieu et al., 1992).

One aspect of training that likely plays a significant role in training effectiveness is the characteristics of the trainer. Studies on training often focus on trainee characteristics, the training content, or the environment in which the training is conducted. In their model of training, Baldwin and Ford address learning and retention, which are directly influenced by training inputs (1988). Training inputs include *trainee characteristics* such as ability, personality, and motivation; *training design*, such as principles of learning, sequencing and training content; and *work environment*, which includes support and opportunity to use the training (Baldwin & Ford, 1988: 65).

By contrast, characteristics of the trainer appear to receive less focused attention. Ghosh, and colleagues (2012) provide a summary table of past research on trainer attributes, which include studies on attributes such as providing feedback, listening, learning environment, questioning, communication skills, relationship with trainee, knowledge of content, ability to use teaching aids/media, and problem solving. Many of these attributes allude to the ability of the trainer to adequately conduct training, and involve some consideration of competence. While competence is desirable for effective learning, other attributes, such as individual differences based on traits and personalities may be important, as will individual differences such as VBM.

A noteworthy finding of recent meta-analysis is that characteristics of the training regarding interaction with the trainer were the best predictors of reactions to training (Sitzmann, Brown, Casper, Ely, & Zimmerman, 2008). Indeed, the authors use this to point out that reaction level measures are important to evaluate the training experience, as

"reactions influence motivation processing during training" (Sitzmann et al., 2008: 287). In turn, this may influence learning also (e.g. Sitzmann et al., 2008). Accordingly, it is expected that VBM is likely to influence reactions to the trainer, as well as learning.

In particular, this dissertation seeks to establish if visible tattoos, as a trainer characteristic, may influence these reactions and thus influence learning. As a whole, interpersonal skills are useful in training (e.g. Ghosh et al., 2012), but these skills may only compensate for so much if trainees do not find the trainer to be trustworthy. Perceived trustworthiness, as a result of exposure to a visibly tattooed trainer, will then impact training effectiveness, as measured by learning. Specifically,

H5: Perceived trustworthiness of a trainer will be directly related to learning, such that as perceived trustworthiness increases, so will learning.

2.7 Goal Orientation

In examining learning outcomes in training, individual goal orientation requires consideration. Goal orientation classifies the way an individual approaches an "achievement situation" (Hirst, von Knippenberk, & Zhou, 2009: 281), which in this study is a training. When individuals encounter situations that challenge them, they have two major approaches, either a learning goal orientation approach or a performance goal orientation approach (Dweck & Leggett, 1988). Learning goal oriented trainees will approach challenges as opportunities to gain knowledge and mastery over that challenge, and ultimately focus on improving their performance (Seijts, Latham, Tasa, & Latham, 2004) while performance goal oriented trainees will prefer tasks that allow them to demonstrate their abilities or competence, with less concern for actually developing knowledge (Seijts et al., 2004).

As those with a learning goal orientation are more inclined to persist and make effort in a training context, and are more likely to enjoy experiencing a challenge (Brett & VandeWalle, 1999), it is expected that in training situations where a trainer has visible tattoos, even if the visible tattoos decrease perceived trustworthiness, learning goal oriented individuals will perform better than those without a learning goal orientation. This performance is anticipated, because high learning goal orientation is expected to enhance learning, regardless of the characteristics of the trainer. In the context of training and learning, goal orientation may play a significant role in moderating the relationship between perceived trustworthiness and learning.

H6: Learning goal orientation will moderate the relationship between perceived trustworthiness and learning, such that those high in learning goal orientation will exhibit greater learning than those with a low learning goal orientation, strengthening the anticipated relationship between perceived trustworthiness and training.

2.8 Chapter Summary

This chapter discussed the research question and provided the literature review for visible tattoos and the constructs used in this dissertation. This chapter introduced the hypothesized model and six specific hypotheses were developed. The next chapter will discuss the research methodology and the measures that will be used to test the research hypotheses.

CHAPTER III

RESEARCH METHODOLOGY AND DESIGN

This chapter explains the research design and methodology used to test the relationships hypothesized in chapter two. First, this chapter reviews the sample, survey development, and quasi-experimental design used to test the hypotheses. The subsequent section discusses the items used to measure the independent, dependent, mediating, and moderating variables. The third and final section details the methodology used to test the hypotheses and analyze the results of the data collection.

3.1 Study Design

The purpose of this dissertation is to test the hypothesized effect of visible tattooing on perceived trustworthiness and learning outcomes in a training context. Furthermore, this dissertation examines the moderating effect of social distance, authoritarianism, openness to experience, and goal orientation on trustworthiness and learning, utilizing a quasi-experimental design.

3.1.1 Sample

The sample consisted of undergraduate students, most of whom are anticipating entering the workforce upon degree completion, and adults recruited through Amazon Mechanical Turk (AMT). The student sample was collected from undergraduate business classes, and the AMT sample was limited to respondents 24 years of age or older. Thus,

the student sample primarily included respondents who were born after 1980 who fall in the age range identified as those most likely to have tattoos (Pew Research Center, 2010), and the AMT sample included respondents born before 1980.

Given the stigmatized nature of tattooing (e.g. Kosut, 2006), even among the group most likely to have tattoos, there likely will still be negative attitudes and stereotypes against tattoos (Degelman & Price, 2002). However, younger respondents, as a group, are most likely to have or accept tattoos (Kosut, 2006). Thus, the sample provided a conservative test of the hypothesized model. If negative effects due to tattoos are observed with this group, it is possible that other groups will see even more pronounced effects.

The AMT sample was included to determine if subjects react differently to the training based on age. Older respondents may be less accepting of tattooing. Responses from subjects born before 1980 may also provide meaningful findings, as these subjects represent an age group that is less likely to have tattoos when compared to their younger counterparts (Kosut, 2006).

3.2 Data Collection

After obtaining IRB approval, online survey links for the student sample were distributed in class, with instructors of each class providing their students with the URL of the survey website. To improve response rate and encourage participation, instructors were asked to also email the link to their students. To incentivize participation, respondents were informed that upon completion, they would be directed to an additional website where they can enter their email address for a chance to win one of two $50 gift cards. For courses where the instructor agreed, students also received extra-credit for

participating in the research. The survey includes personality measures, the training video, learning assessment, the social distance measure, the trustworthiness measure, and demographic information.

Participation in the study was voluntary, and this was explicitly stated both by the instructor and by the survey instructions. If a participating instructor offered their students a nominal amount of extra credit to participate, the instructor was also asked to provide an alternate opportunity for extra credit. The survey form also informed the subjects that their responses would be kept confidential and that only the researcher would have access to their responses. In order to report back to instructors whether or not students participated in the study, upon completion of the survey, students were re-directed to a secure website that was not linked to the survey to log their participation information. Names were not associated with responses, and were only kept for means of reporting participation to instructors. The same re-direction to a secure website was also done to collect emails for the chance to win one of the two gift cards. Two email addresses were selected using a random number generator, and the gift card link was mailed to those two addresses.

3.3 Scenario and Quasi-experimental Design

A quasi-experimental design was used to test the hypothesized relationships, as controlling for trainer tattoos across subjects was desirable. Upon agreeing to participate in the study, subjects were given a web address for the survey. Random assignment was generated by the survey software. The treatment groups received the same information and training as the control group, with the manipulation being that the trainer in treatment condition one had one visible tattoo on his forearm, in treatment condition two had tattoo

"sleeves" where his entire arms were tattooed, and in the control group did not have any visible tattoos. In all conditions, the trainer was wearing a short-sleeved polo shirt. In accordance with the working definition of VBM, tattoos on the forearms were expected to be visible, as short-sleeved shirts are considered to be appropriate work attire in many organizations.

The use of a training scenario was necessary to approximate a work-training context. At the beginning of the study, subjects were told that the study was investigating computer-based video training for the entry-level position of bank teller, and that their participation would aid in research about the effectiveness of computer-based training. Subjects were given a short description of the bank, which gave them basic background about the fictitious organization. Subjects were told that the training was for a teller's position at a branch of a well-known regional bank, located in the downtown area of a mid-sized city. The bank handles both commercial and personal banking, and the position being trained for will require the teller to work in the lobby of the downtown branch. Respondents were instructed that they would complete a short test to determine their banking knowledge. After that, they were asked to watch a training video, imagining that they are a new hire in the organization, training for the described teller's position. Prior to watching the video, subjects were also informed that they would be asked questions about the training to assess how much they learned from computer-based training in order to engage them in the training.

All respondents watched a training video, led by a Caucasian male trainer. The trainer was dressed in a short-sleeved polo shirt branded with the fictitious bank logo, thus making his forearms visible. For all conditions, the training was filmed the same

way, with the same training script (Appendix A), which provides instruction on check cashing procedures. To ensure accuracy and lend credibility to the study, the script for the training video was developed by talking to bank tellers who served as subject matter experts, focusing on a job skill they identified as being essential to a bank teller's job. In watching the training video, subjects were randomly assigned into one of three conditions. The control group will see a trainer with no visible tattoos, while two experimental conditions will see either a trainer with one tattoo on one arm, or a trainer with tattoo "sleeves" on both arms. A attention check, which is discussed in more detail later in this chapter, was used to ensure that the subject observed or was aware of whether or not the trainer had tattoos.

3.4 Dependent Variable Measure

The dependent variable in this study was training success, based on the content the subject retains from the training. Learning was assessed with a multi-item multiple-choice test. Following prior tests of training learning outcomes (e.g. Dierdorff, Surface, & Brown, 2010), learning was assessed as a percentage of correct responses to the multiple-choice test. To ascertain (and thus control for) prior knowledge of the training content, subjects were presented with the learning assessment items prior to the training as well as after the training. The items used to assess learning were developed based on the content of training, and were pre-tested in a pilot study to assess reliability. The pilot study compared pre-test and post-test scores to determine if the training influenced post-test scores. The results of this can be found in Chapter IV. The full set of questions used can be found in Appendix B.

3.4.1 Reaction Level Measure of Training Success

Additionally, as training success can also be measured at the reaction level, reaction measures were included in the study to establish if reactions to the training are consistent with learning measures. While reaction-level variables were not included in the hypothesized model, they were collected for post-hoc analysis, as understanding reactions to training can also be useful in evaluating training success. As discussed above, perceived trustworthiness is conceptualized as a reaction to the trainer. However, overall reaction to the training can also be evaluated.

There are mixed findings on the influence of immediate training reactions on subsequent learning (Alliger, Tannenbaum, Bennet, Traver, & Shotland, 1997; Sitzmann et al., 2008). Reactions do not consistently have a direct impact on learning or transfer of training, but there is evidence to suggest that reactions influence learning in some contexts. However, even when reactions do not influence later training outcomes, reaction level assessment remains useful (Brown, 2005). Reactions may influence how subsequent trainings are designed, promoted, and conducted. Specifically, Brown (2005) points to three uses of trainee reactions. First, they can be used for decision making. This use is the most consistent with the measure of satisfaction that is often used in assessing reaction. Through measures such as satisfaction, organizations can determine if elements of the training need to be changed. Notably, Brown (2005) references the use of reactions to decide whether or not an organization should continue to use a specific trainer to conduct the training. Other uses for reactions include feedback and marketing (Brown, 2005). Similar to decision making about the conduct of training, reactions can provide feedback about how a training can be improved, influencing the content of the

training. Lastly, reaction level data can be used for marketing purposes by the organization, as positives reactions are useful for promoting training and encouraging employees to engage in training (e.g. "98% of our employees who completed the training found it useful!") (Brown, 2005).

Recent meta-analyses suggest that reactions are related to both affective and cognitive training outcomes. Affectively, reactions are related to trainees' levels of self-efficacy and motivation. Cognitive outcomes related to reactions included post-training declarative and procedural knowledge (Sitzmann et al., 2008). However, the researchers are careful to point out that these learning outcomes were also influenced by affective outcomes (Sitzmann et al., 2008). Taken together, it would seem that affective outcomes play an important role in influencing learning.

A common reaction level measure is the trainee's level of satisfaction with training. This measure is used to capture multiple facets of reaction, and some evidence suggests that when used as a higher order construct, satisfaction can relate to learning (Brown, 2005). It is important to note that while prior research has found meaningful results related directly to affective or cognitive difference, meta-analysis of multiple studies suggests that breaking down reaction level measures into these facets does not provide additional value beyond just a general measure of satisfaction (Sizmann et al, 2008: 287). As such, while items are associated with either the cognitive or affective facet of the larger construct, these together can be used to assess overall satisfaction. Reaction items are adapted from a scale developed and validated by Staples (2009). The reliability measures for these scales are acceptable, with an alpha of 0.90 for affective reaction, and 0.91 for cognitive reaction (Staples, 2009). These items were developed for

use in prior dissertation research on training reaction (Staples, 2009), and were adapted to fit the current study. Items in the scale were measured ranging from 1 "strongly disagree" to 5 "strongly agree". The items are shown in Appendix C, table C.1.

3.5 Independent Variable Measure

The primary construct of interest, Visible Body Modification, was operationalized as visible tattooing on the arms. As part of the quasi-experimental design, the presence or absence of tattoos was a categorical variable, determined by whether or not or not the trainer had visible tattoos. While tattoos only represent one part of VBM, they are more prevalent than piercing (Swanger, 2006; Whelan, 2001) and thus are more salient in examining the impact of VBM in organizations. Study respondents were exposed to one of three conditions, as outlined in Table 3.3. An attention check was conducted, and it is further explained in section 3.9.2.

Table 3.1 Visible Body Modification of Trainer

Condition 1: Trainer has no visible tattoos Condition 2: Trainer has one visible tattoo on arm. Condition 3: Trainer has multiple visible tattoos on both arms.

3.6 Mediating Variable Measures

3.6.1 Trustworthiness

Trustworthiness was assessed using scale items developed by Mayer and Davis (1999) to measure ability, benevolence, and integrity. These measures have been used to measure trustworthiness of top management teams and supervisors, and have also been used in examining the relationship between trustworthiness and trust (Mayer & Davis,

1999; Colquitt & Rodell, 2011). The initial scale developed by Mayer and Davis was modified by replacing the term "top management" (1999) with "the trainer". Mayer and Davis (1999) report high coefficient alphas for all three sub-scales. For two samples, alphas were 0.85 and 0.88 for ability, 0.87 and 0.89 for benevolence, and 0.82 and 0.88 for integrity (Mayer & Davis, 1999). Colquitt and Rodell (2011) also reported strong alpha values ranging between 0.85 and 0.96. Reported confirmatory factor analysis also indicated good model fit for the three construct scale over a single higher order scale (Colquitt & Rodell, 2011). Items in the scale were measured ranging from 1 "strongly disagree" to 5 "strongly agree". The items are shown in Appendix C, Table C.2.

3.7 Moderating Variable Measures

3.7.1 Social Distance from Trainer

Social distance was assessed using a modified version of the original Bogardus social distance scale (Bogardus, 1933). This scale has been adapted for a number of studies on social phenomena (Parrillo & Donoghue, 2005) and is particularly useful in understanding social relationships with commonly stigmatized individuals (e.g. Feret, Conway, & Austin, 2011; Schomerus, Matschinger, & Angermeyer, 2009). The scale items ask respondents how willing or comfortable they are associating with another person. To establish this, the items become progressively closer in social distance, with the intent of finding the point at which the respondent is unwilling to associate with the other person (Weinfurt & Moghaddam, 2001). Items for the present scale were derived from those employed by Schomerus and colleagues. (2009; see also, Feret et al., 2011). Items from these two scales are very similar, with slight differences in wording. Adapting the social distance scale for the stigmatized behavior of substance abuse,

Brown (2011) reported an alpha of 0.85. Items in the scale were measured on a Likert scale ranging from 1 "very likely" to 7 "very unlikely". The items for this scale are shown in Appendix C, table C.3.

3.7.2 Social Distance through Social Identity

While an existing Social Distance scale will be used, a second measure of distance based on Bergami and Bagozzi's (2000) visual scale was also utilized. Social identity can be operationalized a number of ways, with four primary dimensions being out-group salience, in-group attraction, interdependency with the in-group, and depersonalization (Jackson & Smith, 1999: 121). As the social identity context in this dissertation was focused on perceptions of the "other", the appropriate conceptualization was that of examining the inter-group context as the respondent evaluates a potential identity congruence they may have with another. Bartels and Hoogendam (2011) reported Cronbach's alpha values of 0.71 and 0.86 for their measures of social identity with two different groups, both suggesting good reliability for the measure. While it is a visual scale, it still followed the structure of a Likert scale, ranging from 1 "Far Apart" to 8 "Complete Overlap". The scale is shown in Appendix C, table C.4.

3.7.3 Authoritarianism

Authoritarianism was measured using a short version of the Right-Wing Authoritarianism (RWA) scale. The RWA scale, initially developed by Altemeyer, began as a 24 item scale, and by late 1970s grew to include 30 items (Altemeyer, 1996). Due to the length of the scale, researchers have developed alternate, shorter scales that can still accurately measure authoritarianism (e.g. Rattazzi, Bobbio, & Canova, 2007;

Zakrisson, 2005). The authoritarianism construct is comprised of three related parts, authoritarian submission, authoritarian aggression, and conventionalism. These facets account for how an individual submits to legitimate authority, how aggressive they are against others when they believe aggression is sanctioned by authority, and to what extent they follow social conventions (Altemeyer, 1996).

The short version developed by Zakrisson (2005) includes 15 items, and in this prior study the Cronbach's alphas ranged between 0.72 and 0.80. Structural equation modeling for model fit was also used to establish adequate validity of the shortened scale (Zakrisson, 2005). The Zakrisson short scale, as reported by the author, may capture a narrower view of authoritarianism, but maintains the three facets initially introduced by Altemeyer. Due to the nature of the present study and the particular interest in how authoritarianism as a personality trait influences relationships involving deviant social behaviors, this scale makes it possible to create a general overall authoritarianism measure. One aspect of this scale, which should be noted, is that the wording of the individual items is somewhat less "extreme" than the original scale items (Zakrisson, 2005). This alteration from the original scale is intended to improve response accuracy, as Zakrisson points out that contemporary society is more aware of "politically correct" responses. The awareness of politically correct answers may cause respondents to shy away from more extremely worded items, thus making it difficult to obtain true responses. While the items are somewhat altered to temper their extreme language, the same key ideas are presented in the items, and remain based on the theoretical rationale of the construct. The items for this scale are shown in Appendix C, table C.5.

3.7.4 Openness to Experience

Openness to Experience was assessed using the Big Five Inventory (BFI) (John & Srivastava, 1999), which provides 10 items to measure openness to experience. In the reliability analysis conducted by John and Srivastava (1999), the BFI scale for openness to experience had an alpha of 0.81, demonstrating acceptable reliability. Items are rated on a Likert scale, ranging from 1 "strongly disagree" to 5 "strongly agree". The items are shown Appendix C, table C.6.

3.7.5 Goal Orientation

Goal orientation was assessed using VandeWalle's (1997) 13-item scale, which is comprised of three dimensions of learning, prove-performance, and avoid-performance goal orientations. This scale is based on earlier work on goal orientation (e.g. Dweck & Legget, 1988), and specifically addresses goal orientation in a work context. Scale development measures suggest reliability, with Cronbach's alphas within acceptable range for all three dimensions, with $\alpha = 0.89$ for learning, $\alpha = 0.85$ for prove, and $\alpha = 0.88$ for avoid (VandeWalle, 1997). Recent uses of this scale found overall good model fit for the items, and tests of internal consistency all fall within acceptable range, with reported alphas ranging between 0.71 and 0.84 (Dragoni, Tesluk, Russell, & Oh, 2009; Hirst, Van Knippenberg, Chen, & Sacremento, 2011; Johnson, Shull, & Wallace, 2011). Items were rated on a scale, ranging from 1 "strongly disagree" to 5 "strongly agree". The items can be found in Appendix C, table C.7.

3.8 Control Variables

Demographic variables were assessed to control for their influence on the hypothesized relationships. Variables such as age, sex, education, and relationship status may influence one's exposure to and understanding of tattoos (e.g. Pew Research Center, 2010). For example, among those born after 1980, males and females are equally likely to have tattoos. However, males are more likely to have visible tattoos as compared to females at a ratio of 23% vs 13% (Pew Research Center, 2010). Demographic variables were measured by asking respondents to answer items such as "What is your age, in years?" and "What is your highest level of education?"

Studies on training show that success is often influenced by trainee ability and skill (Blume et al., 2010). Therefore, student education level and prior knowledge of the training content (i.e. prior experience as a bank teller) were measured. Additionally, personality can also play a role in the success of training (Blume et al., 2010). Prior research has found mixed support for conscientiousness as a personality variable that influences training success (Blume et al., 2010). To control for this possibility, consistent with the scale used for openness to experience, conscientiousness was assessed using the BFI (α=0.82, John & Srivastava, 1999). The items for this scale can be found in Appendix C, table C.8.

Research on visible body modification suggests that there may be perceptual differences of stigma or acceptability based on whether or not an individual has visible body modification of his or her own, although some studies (e.g. Degelman & Price, 2002) have found that ratings of others with tattoos are consistent regardless of whether or not respondents have tattoos. As such, upon completion of other survey items,

respondents were asked to indicate if they had any tattoos or piercings, in what quantity, and in what quantity those were visible given business casual attire (examples of which were provided for both males and females). Respondents were also asked if they were considering getting a tattoo or piercing in the near future, if they previously had any tattoos or piercings that have been removed, and if they had close friends or relatives with visible tattoos or piercings. Subjects were also given the opportunity to describe the type or subjects of any tattoos they reported. Information provided about VBM can be used for both control purposes and post hoc analysis. To encourage self-reporting, subjects were informed that their responses would remain anonymous and confidential. Prior research asking students to self-report tattoos had a strong response rate (cf. Drews, Allison, & Probst, 2000). Additional control variables were the student's age, gender, major, race, marital status, work experience, and number of years in college.

The gender of the confederate or "the trainer" was also controlled for. Studies on attitudes about people with tattoos find that women with tattoos are consistently rated more negatively than men (e.g. Hawkes, Senn, & Thorn, 2004; Swami & Furnham, 2007). To ensure that this bias does not impact or enhance results, the same male confederate was used for the control and treatment groups.

3.9 Statistical Methodology and Analytical Procedures

3.9.1 Testing Scale Psychometric Properties

In order to establish that scales used in this study are reliable and valid measures of the constructs in question, the psychometric properties of the scales were evaluated. This was necessary for both existing scales and scales modified for this dissertation, as even scales with demonstrated past reliability may vary across populations (Churchill,

1979). A Confirmatory Factor Analysis (CFA) was conducted and Cronbach's alphas were established, with a desired cutoff score at 0.70 or above (Nunnally & Bernstein, 1994).

3.9.2 Attention Check

To ensure that the presence of visible body modification was noted by respondents, an attention check was conducted. In the collection of control variables, respondents were asked a series of questions about the appearance of the trainer. To test for a difference between the treatment and the control groups, an ANOVA was conducted. The dichotomous items for the manipulation check can be found in Appendix C, table C.9.

3.9.3 Statistical Methodology

The statistical methodologies used to test the hypothesized relationships were multivariate analysis of covariance (MANCOVA) and hierarchical regression. Given the quasi-experimental design of this study, a MANCOVA is an appropriate way to test Hypothesis 1, as the manipulation creates three conditions that can be compared. The methods used to test this hypothesis are further explained in section 3.11.

Due to the presence of a moderating variable in the hypothesized model, a hierarchical regression is also necessary. Through the examination of interaction effects, moderation can also be tested with hierarchical regression. Regression will be used for moderation analyses in Hypotheses 2, 3, 4 and 6. It will also be used to test the direct relationship between the perceived trustworthiness and learning as stated in Hypothesis 5.

The use of regression for categorical independent variables does not focus on estimating the slope of a line, as it does with continuous independent variables. Rather, instead of focusing on the slope, regression with categorical variables allows for examination of the difference of the means for each category. This will produce the same findings as the MANCOVA when interpreted (e.g. Edwards, 2008), and also, like MANCOVA, allows for the addition of the moderating variables. To facilitate the ability to test for moderation, the independent variable will be dummy-coded for use in the regression equation (Cohen, Cohen, West, & Aiken, 2003). The benefit of dummy coding the independent variable into two dichotomous categorical variables for regression is the ability to specifically compare the means of all three conditions when moderated by using the beta coefficient (Stockburger, 1996), which aids in further analysis. Dummy coding is further explained below in section 3.10, and methods for testing mediation and moderation are discussed in section 3.11.

3.9.4 Determining Sample Size

Statistical power must be taken into consideration when determining sample size. Statistical power is the probability of finding statistical significance given the sample size (Hair et al., 2006). While a high level of power improves the likelihood of correctly finding statistical significance, a large sample size can increase power such that the test becomes too sensitive, resulting in more effect sizes being found statistically significant (Hair et al., 2006). To mitigate the risk of having too much power, it is desirable that the sample size is not excessive. One rule of thumb that can be used is to have 80% power at an alpha level of 0.05 (Hair et al., 2006).

Utilizing G*Power software (e.g. Faul, Erdfelder, Lang, & Buchner, 2007), the necessary sample size for a given level of power and effect size can be determined. Utilizing a small-to-moderate effect size of 0.25 (Hair et al., 2006), a 0.05 level of significance, and power of 0.80, the total sample size needed for a MANCOVA with three treatment groups is 158 subjects. Similarly, for any tests comparing the means between two groups (i.e. any tattoos vs. none), a t statistic with an effect size of 1 standard deviation, a 0.05 level of significance, and a power of 0.80 necessitates total sample size of 28.

3.10 Dummy Coding

The independent variable for this study is categorical, and thus provides no meaningful distinction between categories by which to accurately make statistical comparisons. As such, a categorical variable can be transformed or dummy coded into a dichotomous categorical variable that indicates either the presence or absence of a condition. With this information, these categorical variables can then become meaningful and useful in statistical analysis. For the MANCOVA, it is possible to assign a non-dummy coded coding scheme, but in order to facilitate interpretation in the regression model, zero-one dummy coding is useful (Cohen et al., 2003).

The independent variable in this study, the VBM of the trainer, is represented by the three quasi-experimental conditions: control (no tattoos), one tattoo, and full sleeve of tattoos. In its basic form, these conditions are dummy coded into two categorical variables. Categorical variables with K levels are made into K-1 dichotomous variables (Stockburger, 1996). For the IV in this study, K=3 and thus 2 (i.e. 3-1) dichotomous variables are needed. The two variables, either one tattoo (X_1) or full sleeve (X_2), are

coded as 0/1, meaning that all cases with zeros for both variables would indicate the control group. An example is provided below:

Table 3.2 Dummy Coding Categoraical Variables

Category	X_1	X_2
1 Tattoo	1	0
Full Sleeve	0	1
Control	0	0

The method described above is useful in regression for comparing all three groups simultaneously to determine if they are different. However, it is also possible to test whether those without tattoos (the control group) are viewed differently than those with tattoos (both treatment groups), and also determine if there are differences between the two levels of tattooing.

This can be accomplished through regression, with variables dummy coded to produce a contrast (Stockburger, 1996). To do this, all cases of the control are coded into one variable as -2 for the control, and 1 for the treatment conditions. In the contrast variable, 1vsSleeve, conditions in the control are coded as 0, while those in the one tattoo condition are codes as $1/N_1$ where N_1 is the number of respondents in the one tattoo condition. Those in the sleeve condition are coded as $-1/N_2$, where N_2 is the number of respondents in the sleeve condition. This is illustrated below.

Table 3.3 Contrast Coding Categorical Variables

Category	Control	1vsSleeve
1-Tattoo	1	$1/N_1$
Full Sleeve	1	$1/N_2$
Control	-2	0

The benefit of this method is that it produces a correlation matrix where the control and the experimental conditions are not correlated with each other (i.e. correlation coefficient for Control and 1vsSleeve is 0.000). Entering both dummy coded variables into a regression equation then allows for the determination if either is significant. Entering both simultaneously allows for testing of statistically significant differences in the means, much like an ANOVA. Looking at the coefficients, if the coefficient for the control is found to be significant, this means there is a significant difference between the control and the experimental conditions. If the coefficient is significant for the contrast 1vsSleeve, this means there is a significant difference between the two experimental groups (Stockburger, 1996). The value of testing a dummy coded contrast is that additional interpretable results can be found if one of these coefficients is *not* significant. For example, if the contrast is not statistically significant, the practical significance of this finding may be that subjects do not perceptually differentiate base on the number of tattoos. Rather, any tattoos may produce the same effect. If this is the case, the contrast can then be used for additional analysis for comparisons between control and treatment groups.

3.11 Testing Hypotheses

The procedure to test the hypothesized model for this study, relying on the methods described above for dummy coding, is explained as follows. MANCOVA was used to test for difference between the three treatment groups, and hierarchical linear regression was used to test the interaction effect of the moderators. The steps are detailed below.

3.11.1 Testing for Direct Effects with MANCOVA

The test for direct effects between VBM and perceived trustworthiness was conducted using multivariate analysis of covariance (MANCOVA). The independent variable is categorical in nature, and thus can be analyzed as three distinct groups. Using MANCOVA, it is possible to determine if the treatment group means for perceived trustworthiness differ from each other and from the control. Significant differences in scores would suggest that VBM does influence perceived trustworthiness. Furthermore, analysis can be used to determine how much variance VBM contributes to the model. MANCOVA was used rather than MANOVA (multivariate analysis of variance), as control variables were also entered into the model along with the independent variable. These covariates were included to control for additional variance that is not really attributable to VBM (Tabachnick & Fidell, 2007).

SPSS was used to test all hypothesized relationships. For H1, VBM was entered as the independent variable and perceived trustworthiness was entered as the dependent variable. Control variables were also utilized along with VBM to partial out variance based on characteristics expected to be correlated with the dependent variable (Hair et al., 2006). The use of MANCOVA produces a sum of squares, an F statistic, observed

power, and an Eta-squared. The significance of the F statistic was reported, and any level of significance at or below $p = 0.05$ was considered statistically significant. Observed power can also be determined, which, as stated above in the discussion of sample size, should ideally not exceed 0.80. Eta-squared can be used to determine effect size, and can be interpreted as how much total variance in the model is explained by each variable.

3.11.2 Testing for Mediation

The test for mediation was conducted using the method outlined by Preacher and Hayes (2004). This method is expected to reduce the likelihood of both Type I and Type II errors. Furthermore, this method tests the hypothesized difference between the total effect of the IV on the DV, and the direct effect between the two when a mediator is introduced (Preacher & Hayes, 2004). One of the key differences of this approach is that, while the traditional Barron and Kenny (1986) method establishes an indirect effect by looking at the lack of a direct effect, the method employed here considers the size of the indirect effect (Zhao, Lynch, & Chen, 2010) to determine mediation. It is possible that mediation can occur, even if a direct effect is still detected (Preacher & Hayes, 2004), as the primary concern is that an indirect effect is significant, whether or not a direct effect is still observed. The method detailed by Preacher and Hayes (2004) is also more powerful than using the Sobel test with a traditional mediation model (Zhao et al., 2010).

Tests for mediation consider the direct relationship between the independent variable and dependent variable, and then add the mediator. To assess the full model and test for mediation, an additional analysis was conducted using bootstrapping and regression included in the Preacher and Hayes (2004) macro. The output from this includes the total effect of the independent variable on the dependent variable, the effect

of the independent variable on the mediator, and the effect of the mediator on the dependent variable when controlling for the independent variable. All of these match the Baron and Kenny (1986) method, with the added analysis of the direct effect of the independent variable on the dependent variable when controlling for the mediator, and the indirect effect of the independent variable and the dependent variable through the mediator. (Preacher and Hayes, 2004).

The type of mediation can be established after the analysis by using the typology developed by Zhao, Lynch, and Chen (2010). Their typology includes complementary, competitive, and indirect-only mediation. Complementary mediation occurs when both the mediated effect and direct effect are statistically significant, and both point in the same direct. Competitive is when both are significant, but point in opposite directions. Both of these conditions are similar to what Baron and Kenny (1986) would classify as partial mediation. The third type, indirect-only, is established when the mediated effect is significant, but the direct is not. This is similar to full mediation in the Baron and Kenny model (Zhao et al., 2010).

3.11.3 Testing for Moderation

Hierarchical linear regression was used to test for moderation and is outlined below. Two regressions were conducted, one to test for moderation between the IV and mediator, and the second to test for moderation between the mediator and the DV.

To test for moderation, in Step 1, the control variables (age, gender, major, race, education level, and number of tattoos) were entered. In Step 2, the dummy coded independent variable of the treatment groups was entered. Step 2 tests the hypothesized relationship between VBM and learning. This is done as described above using the

dichotomous dummy coded categorical variables. Step 3 includes the moderators, which are measured using scales, and thus were able to be analyzed like interval level data. Lastly, Step 4 added the interaction terms for each of the moderators.

To test for interaction effects, it should also be noted that moderator variables were first centered by subtracting the sample mean from individual scores, thus centering scores around a mean of zero to reduce problems of mulitcollinearity between the predictor and the moderating variable (Tabachnick & Fidell, 2007). Once the variables were centered, each hypothesized interaction term was established by multiplying the independent variable by the moderator, such as Perceived Trustworthiness X Goal Orientation for testing moderation for the relationship between Perceived Trustworthiness and Learning.

For interactions with the categorical independent variable, a linear hypothesis was tested. Specifically, this was established by creating contrasts using the dummy coding presented above (in essence, creating interaction terms), where contrasts are the interaction between a dummy variable and a moderating variable. For both situations, continuous or categorical, the interaction term is then added to the regression equation in the next step (Baron & Kenny, 1986). If the beta coefficient for the interaction term was significant ($p < 0.05$), this established that moderation exists.

While regression makes it possible to understand if a statistically significant relationship exists, interpreting the moderation for continuous variables requires that the interaction be plotted. This is best accomplished by plotting the regression at three levels of the moderator, ideally, at the mean as well as one standard deviation above and below the mean. Alternately, the high and low cut-offs can be made at a theoretically

significant break (Cohen et al., 2003). For the categorical IV, moderation can be determined to exist when the difference in the means between the groups change at different levels of the moderator.

3.12 Post Hoc Analysis

As suggested earlier, dummy coding to create contrasts provided to the opportunity to test for the difference between the control and treatment groups, as well as interactions between the moderators and different quasi-experimental groups. Further post hoc analyses with control variables was also conducted utilizing contrasts, as discussed in section 3.10.

3.13 Chapter Summary

This chapter outlined the research methodology to test the hypotheses of this dissertation. The sample, research scenario, survey items, and data analysis procedures were presented.

CHAPTER IV

DATA ANALYSIS AND RESEARCH RESULTS

This chapter discusses the research results, including a description of the pilot study and the full dissertation study. First, the pilot study, including descriptive statistics and difference tests will be discussed. Next, a description of the full study will be presented, followed by tests of scale reliability and validity. Lastly, the results of the hypotheses will be reported.

4.1 Sample

Data for this dissertation were first collected as part of a pilot study, which examined the reliability of the training content along with the pre- and post-test measures. The second data collection was conducted as part of the full study, which included all measures and conditions. Both of these studies are described below.

4.1.1 Pilot Study

A pilot study was conducted to determine if the training content provided the information needed to measure post-training learning. Learning was measured by comparing pre-test scores of a 15 item questionnaire (as shown in Appendix B) to post-test scores of that same questionnaire.

Data were collected from 38 undergraduate and graduate students at a public Midwestern university. Half were in the treatment group and were exposed to the

training content (see Appendix A for full training script), while the other half were in the control group and completed the questionnaire without exposure to the training content. Subjects were administered the pre-test questionnaire first. After the pre-test, those in the treatment group listened to the training content, which was delivered by the researcher presenting the training script as a training session to the subjects. All subjects answered a personality questionnaire comprised of the personality items in the survey (see Appendix C for survey items) and then took the post test. The pacing of content in the pilot study, in terms of the amount of time spent on the questionnaires and training, was designed to mirror the pacing of content in the full study.

Results from the pilot study indicated that the training content did provide content related to the test. This was assessed by comparing pre- and post-test gain scores (i.e. difference scores; Vogt, 2005) to determine if there was a change in score after exposure to the training content. Gain scores were calculated by subtracting the pre-test score from the post-test score, which provided a value (either positive or negative) that indicated the change in score (Cohen et al., 2003). A positive gain score indicated that the number of correct answers on the post-test went up, while a negative gain score indicated that the number decreased.

An ANOVA (Cohen et al., 2003) was used to compare gain scores between the two conditions. The mean gain score for the control condition ($M= 2.79$, $SE= 0.71$) was lower than the mean gain score for the treatment group ($M= 6.26$, $SE= 0.50$). The difference in means indicates that there was a statistically significant difference between the mean gain score for the control group versus the treatment group ($F=15.943$, $p < 0.00$). This finding suggests that exposure to the training content did have an impact on

post-test scores. Using this, it was determined that the pre-test, training, and post-test were suitable for use in the main study, as the training did lead to improved post-test scores (as opposed to improvement merely due to repeated exposure).

4.1.2 Full Study Questionnaire

Questionnaires for the full study were distributed online via Qualtrics survey software. The survey was organized into six major sections of which the participants accessed in sequential order. The first section was the introduction and individual differences questionnaire. The participants were informed the survey was used to assess how people learn in online training, and were then asked questions related to how they "prefer to learn and work." In this section, the scales for openness to experience, goal orientation, and authoritarianism (see appendix C for scale items) were assessed using a 5-point Likert scale ranging from Strongly Disagree to Strongly Agree. To detect bias or careless responses, an item of "Please choose Agree' for this item" was included as an attention check. Attention checks of this nature were used at multiple points in the survey to ensure that responses were not the result of respondents randomly choosing an answer without reading the item.

The second section of the survey included the pre-test, which asked banking knowledge questions related to the training content (see appendix B for questions). The pre-test also included an attention check item of "In the list below, please choose the color red." After completing the pre-test, participants were informed they would be watching a training video for the position of a bank teller and the software randomly directed them to one of three training videos. This is further explained below in the discussion of the manipulation. Following the video, the fourth section of the survey was

a post-test that asked the same questions used in the pre-test, and it also included the item "In the list below, please choose the color blue" as an attention check.

The fifth section asked questions about the trainer and the training. These items included reactions assessed with a 5-point Likert scale, the scales for social distance and social identification (see appendix C for scale items) and the attention check item of asking the respondent whether or not they agreed with the statement "The trainer had a tattoo." This item was used to assess whether or not the respondent noticed the condition they were exposed to. The sixth and final section asked the survey participants to provide demographic information.

4.1.3 Full Study Sample

Surveys were disseminated in two groups. The first was a student group, collected in the summer and fall of 2014. The average age of this group was 24.22 years. The second was a group solicited from Amazon Mechanical Turk (AMT) in the fall of 2014, with a mean age of 38.68 years.

For the student sample, survey links (URLs) were distributed to undergraduate students enrolled in 10 different business courses at a large public university located in the Southeastern United States. Students were offered nominal extra credit from their instructor, in exchange for completing the survey.

Of the student group, 171 accessed the survey. Out of these, 11 were excluded, because they accessed the survey site, but did not continue past the informed consent (and thus did not begin the survey). The survey was started by 160 subjects. Of these, 19 subjects quit the survey before, during, or immediately after the training video, resulting in a total of 141 (88.13%) completed responses. An additional 17 were

excluded due to issues such as failing the initial attention checks, failing the pre/post-test attention checks or demonstrating survey acquiescence (e.g. all responses were 5, even on reverse coded items). This resulted in 124 (77.5%) remaining responses out of the 160 survey attempts.

The second group, surveyed through AMT, accessed the survey website 298 times. Of these, 4 of those who accessed the survey did not progress past informed consent, 50 did not progress past the age pre-screen (those under 24 years old were screened out, due to the desire to collect a sample different from traditional undergraduate student age group which had an average age of 24), and 24 did not progress past the country of origin or residence screen (which was restricted to the US only). This resulted in 220 respondents eligible to begin the survey. The survey was started by 210 subjects. Of these, 59 quit the survey at, during, or immediately after the training video, resulting in a total of 151 (68.64%) responses out of those eligible to complete the survey.

Combining the student and AMT data, the survey was started by 370 participants, of which 292 (78.9%) completed and submitted the survey. Seventeen surveys were excluded due to the subject failing at least one survey personality questionnaire or pre/post-test attention check (i.e. "Please choose 'Agree' for this item"). An additional 81 responses were removed for failing the check to determine if the tattoos were noticed. Fifteen respondents incorrectly identified whether or not the trainer had a tattoo, and 66 indicated that they were unsure (see Table 4.2). After removing responses that failed attention checks, an additional 30 surveys were excluded for failing to provide usable responses to one or more of the scales used in the hypothesis testing. This resulted in 164

usable responses for the confirmatory factor analysis (CFA) and hypothesis testing. This number exceeds the sample size required for statistical power, as discussed in Chapter Three.

Demographic information about the samples is shown in Table 4.1.

Table 4.1 Demographic Characteristics of Full Study Sample

	Student Sample	mTurk Sample	Combined Sample
	n= 63	n=101	n=164
Gender			
Male	40 (63.5%)	48 (47.5%)	88 (53.7%)
Female	23 (36.5%)	53 (52.5%)	76 (46.3 %)
Average Age (yrs)	24.22	38.68	33.13
std. dev.	*5.08*	*11.43*	*11.82*
Average PT Work (yrs)	2.32	2.21	2.25
std. dev.	*2.67*	*3.96*	*3.5*
Average FT Work (yrs)	1.87	12.10	8.25
std. dev.	*3.19*	*11.82*	*10.74*
Body Modification			
At Least One tattoo	16 (25.4%)	30 (29.7%)	46 (28.0%)
Tattoo, no Piercing	*7 (11.1%)*	*15 (14.9%)*	*22 (13.4%)*
Tattoo & Piercing	*9 (14.3%)*	*15 (14.9%)*	*24 (14.6%)*
At least One piercing, No tattoos	5 (7.9%)	3 (3.0%)	8 (4.9%)
No tattoos or piercings	42 (66.7%)	68 (67.3%)	110 (67.1%)

4.1.4 Manipulation

The manipulation for this study was achieved through the use of a training video. Subjects in all conditions watched a training video based on the training script (as shown in Appendix A). The trainer was a Caucasian male in his mid-20s, and all three training conditions were filmed and edited to be consistent so that the only difference between the three training videos was the number of tattoos the trainer had on his forearms (as shown

in Appendix D). The control condition training video depicted the trainer with no tattoos. This was achieved by using tattoo concealing makeup. The 1-tatto condition training video depicted the trainer with one tattoo on his arm. This was also achieved by using tattoo concealing makeup, but one tattoo was left uncovered. The full sleeves condition training video depicted the trainer with tattoos on both forearms, colloquially referred to as "sleeves" (e.g. Brallier et al., 2011). For this condition, the trainer's own tattoos were left uncovered, and additional temporary tattoos were added to increase the number of tattoos on his left forearm. The tattoos were added with the use of tattoo markers and high quality temporary tattoos intended to mimic real tattoos. To eliminate the sheen associated with temporary tattoos, a light layer of concealer was used to dull the color and create a realistic tattoo appearance. Temporary tattoos were applied based on the trainer's preference for design and placement

To determine whether or not respondents perceived the tattoos, subjects were asked to respond to a treatment check (c.f. Marett, 2015) statement "The trainer had a tattoo." They were given the option of choosing *Yes*, *No*, or *Unsure*/*I don't know*. A response was coded as "correct" if the respondent was in the control and responded "no", or if the respondent was in one of the two experimental conditions and responded "yes." A response was coded as "incorrect" if the respondent was in the control and responded "yes" or if the respondent was in one of the two experimental conditions and responded "no." Lastly, a response was coded "unsure" if the respondent was in any condition and responded "Unsure/I don't know." Reponses to this item are represented in Table 4.2 below.

For the purpose of Table 4.2 only, a sample of 275 is used. This sample was achieved, as detailed on page 97, by removing 17 surveys from the initial 292 completed surveys. These 17 surveys were removed first due to failed attention checks in the personality questionnaire and pre/post-tests, which suggest that these 17 respondents may have randomly selected survey answers without reading the corresponding survey item. The remaining 275 surveys had a pattern of response that suggested the respondents were paying attention to the survey both before and after the training video, thus improving the likelihood that responses to the treatment check item "The trainer had a tattoo" were legitimate responses, and not a product of random response due to inattention to the survey item.

Table 4.2 "The trainer had a tattoo" responses

n=275	Correct			Incorrect			Unsure			
	Student	AMT	**Tot**	Student	AMT	**Tot**	Student	AMT	**Tot**	
Control	15	33	**48**	1	0	**1**	24	15	**39**	*88*
1-Tattoo	28	40	**68**	2	7	**9**	12	5	**17**	*94*
Sleeves	32	45	**77**	3	2	**5**	6	4	**10**	*92*
Total	*75*	*118*	***193***	*6*	*9*	***15***	*42*	*24*	***66***	***274****

* One response missing from student group due to item non-response

Collapsing the two tattoo conditions together, 78% of those exposed to a tattoo condition indicated the trainer had a tattoo, 14.5% were unsure, and 7.5% incorrectly said "no." A chi-square analysis (Tabachnik & Fidel, 2005) was performed to examine the response to this item. The result of this test finds that subjects were not responding correctly or incorrectly by chance χ^2 (4, N=274) = 34.44, $p < 0.001$ (Babbie, 2001). This indicates that responses were not independent of the condition to which the subject was

exposed. Taken with the frequencies, the data suggests that the majority of those exposed to a tattoo condition noticed it, and that this majority was correct.

Looking again at the frequencies, few subjects incorrectly said the trainer had no tattoo in the treatment conditions. Rather, those who did not fall in the "correct" category did so most often because they were unsure. Furthermore, of the 66 who reported that they were unsure, over half were from the control condition. This pattern suggests that more subjects were unsure when they were asked about something they did not see, as compared to those who were unsure when asked about something that they were exposed to.

The number of "I don't know" (i.e. unsure) responses from the control condition is not surprising, for several reasons. First, subjects might have responded "unsure," because while they did not see a tattoo, it did not exclude the possibility that the trainer had a tattoo. Also, respondents in the control group could be unsure due to the order in which questions were asked. In the section of the survey where the tattoo question was placed, there were other questions about the trainer. After being asked questions about the character of the trainer and then specifically about a tattoo, subjects might begin to doubt their memory, or worry that they missed something. Furthermore, it may have been more difficult for the control group to remember what they did not see, as compared the experimental groups recalling something they did see. Future research may be better served by an item that instead reads "I saw a tattoo" on the trainer, to eliminate the possibility that subjects choose "I don't know" because they feel they do not have enough information to assess whether or not he had a tattoo.

An additional open response item asked respondents to describe the tattoo if they indicated that the trainer had a tattoo. For the single tattoo condition, 66 respondents correctly stated the quantity and location of the tattoo; and of these, 15 also accurately described what the tattoo looked like. A similar response pattern was found for the full sleeve condition, as 70 respondents correctly described the quantity and location of the tattoos. Of these, four respondents correctly identified that one of the trainer's tattoo sleeves had pumpkins, and one respondent correctly identified that the other arm had nautical elements. Of the 70 who correctly described the tattoos, 22 referred to the tattoos in the condition with the term "sleeve" or "sleeves". This, combined with the attention check item detailed above, indicated that the treatment generally worked as intended.

4.2 Scale Assessment

The measures used in this dissertation were presented in Chapter Three, along with reported reliabilities of these scales in published research (e.g. Zakrisson, 2005). While some scales, such as openness to experience were unchanged, other scales, such as trustworthiness, were modified to match the context of the study. For example, the object of the trustworthiness scales was changed from "top management" (cf. Mayer & Davis, 1999) to "the trainer" to reflect assessment of the trainer. The reliability of established scales may not be consistent across different populations (Churchill, 1979). Thus, to establish the psychometric properties of the scales used in this research, internal reliability analysis and factor analysis were conducted.

4.2.1 Scale Reliability

Scale reliability was assessed using Cronbach's alpha. All scales met the pre-established cutoff of 0.70 (Nunnallly & Bernstein, 1994). The Cronbach's alpha for each scale is reported in Table 4.3 below.

Table 4.3 Cronbach's Coefficient Alpha

Scale (n=164)	Alpha
Openness to Experience	0.83
Learning Goal Orientation	0.88
Authoritarianism	0.90
Trustworthiness – Ability	0.95
Trustworthiness – Benevolence	0.92
Trustworthiness – Integrity	0.83

4.2.2 Scale Dimensionality

To further assess the scales, a confirmatory factor analysis using structural equation modeling was conducted. As existing scales were used, factor structure was pre-determined. The CFA serves to further establish dimensionality and factor structure (Kelloway, 1998).

4.2.2.1 Confirmatory Factor Analysis

Confirmatory Factor Analysis was conducted through Structural Equation Modeling (SEM; Kelloway, 1998), with the intent of assessing model fit (Hair et al., 2006). AMOS 22.0 software was used to test the factor model. The initial model tested included all items for each of the constructs used in hypothesis testing. Variables were treated as latent variables of the constructs and error terms were uncorrelated (c.f. Kelloway, 1998). Social distance was not included in the CFA, as the individual items

are not latent variables of the construct as each item of that scale incrementally increases social contact.

The proposed model used previously validated measures, and the CFA serves to determine whether or not the data follows the proposed factor structure. This is done using goodness of fit measures (Hair et al., 2006). It should be noted that as this CFA used existing validated scales, the goal was not to engage in scale development. Rather, the CFA was conducted to determine if the data fit the hypothesized measurement model (Hair et al., 2006). As Hair and colleagues (2006) state, "changes to the model should be made only after careful consideration" (p. 798). They elaborate that while items that do not perform well due to model fit may be candidates for deletion, dropping items to achieve fit at the expense of theory is not always an ideal solution (Hair et al., 2006). Accordingly, while model fit is important, it is achieved with theory and the pre-established validity of the extant scales in mind.

4.2.2.1.1 Explanation of Fit Statistics

Goodness of fit measures are intended to compare the estimated covariance matrix to the observed covariance matrix (Hair et al., 2006), with the assumption that the closer the two are mathematically, the better the data "fits" the proposed theoretical model (Hair et al., 2006). The first measure to be considered was the Chi-Square (χ^2) goodness of fit test. This test determines the statistical difference between the two matrices of the proposed and null model. For this test, a low chi-square value is desirable (Hair et al., 2006). However, both the sample size and number of variables in the model inflate the χ^2 such that it is not always indicative of model fit (Hair et al., 2006).

Similarly, the p-value of the χ^2 is used to assess model fit, with a desirable p-value above 0.05 (Hair et al., 2006). However, like the χ^2, the p-value can be influenced by both a large sample size and a large number of observed variables (Hair et al., 2006). Overall, while it is commonly used fit measure (Hair et al., 2006), the chi-square test can be mathematically influenced by the sample size such that larger degrees of freedom can bias and degrade model fit (Kenny & McCoach, 2003). Thus, this test alone is not sufficient. Accordingly, there are a number of fit indices that can be examined in addition to the chi-square goodness of fit (Kelloway, 1998).

One goodness of fit measure derived from the χ^2 is a ratio known as Cmin/df, which divides the chi-square by the degrees of freedom. This measure assesses model fit by comparing the ratio of the two, which provides a value that can be assessed regardless of inflation due to sample size. However, both Kelloway (1998) and Kenny (2014) point out that there is not one generally agreed upon threshold of what this fit index should be, with some sources citing an upper threshold of 5, and others suggesting 2 (Kelloway, 1998). Thus, while this dissertation reports the Cmin/df score, other measures of fit that are both useful and generally accepted are detailed below.

The Goodness of Fit Index (GFI) attempts to correct for sample size inflation, however sample size may still indirectly influence it (Hair et al., 2006). A desirable GFI score is 0.90 or higher (Kelloway, 1998; Hair et al., 2006). Similarly, the Adjusted Goodness of Fit Index (AGFI) assesses goodness of fit, while adjusting the GFI based on degrees of freedom (Hair et al., 2006). As Hair and colleagues point out, "The AGFI penalizes more complex models and favors those with a minimum number of free paths" (2006, p. 747). The result of this is that while the a score .90 is also desirable, the AGFI

value or the model tested will likely be lower than the GFI, given the complexity number of paths in the model (cf. Hair et al., 2006).

The Normed Fit Index (NFI) addresses comparative fit, and tests the proposed model against a null model with no relationship between variables (Kelloway, 1998). This comparison is calculated by using the chi-square value. A model with an NFI of 1 would indicate perfect fit (Hair et al., 2006). A related measure, the Comparative Fit Index (CFI), is based on the NFI but also takes into account model complexity to more accurately assess model fit and is noted as being one of the "most widely used [fit] indices" (Hair et al., 2006, p 749). Like the GFI, a desirable value is .90 or higher to indicate good fit (Kelloway, 1998).

The NFI and CFI are classified as incremental fit indices, which are indices that compare to a baseline or null model (Hair et al., 2006). A third incremental fit index that can be used is the Tucker Lewis Index (TLI). Similar to the CFI, higher values approaching 1 are desirable (Hair et al., 2006).

Parsimony Fit Indices are used to determine whether fit exists given the complexity of the model (Hair et al., 2006). These fit indices are higher with either simpler models or better model fit (Hair et al., 2006). Hair and colleagues do state that "the indices are not useful in assessing the fit of a single model, but are quite useful in comparing the fit of two models, one more complex than the other" (2006, p. 750). In this vein, these fit indices have limited utility on their own, but can be used when comparing two models.

One measure that can be used to do this is the Parsimony Goodness of Fit Index (PGFI). Like previous indices discussed, the score range for this index is between 0 and

1, with higher numbers indicating better fit. However, according to Kelloway (1998), Parsimony Fit Indices do not have the same 0.90 cutoff as other fit indices (p. 32). Rather, in comparing two models, the model with the higher PGFI is deemed to be better (Hair et al., 2006). The Parsimony Normed Fit Index (PNFI) is used in the same manner.

Lastly, two other useful absolute fit indices are the Root Mean Residual (RMR) and the Root Mean Square Error of Approximation (RMSEA) (Hair et al., 2006). Like the chi-square statistic, both evaluate how well the theorized model fits the data. For the RMR, values can fall between 0 and 1. The cutoff score for RMR is 0.05, where lower values indicate better fit (Kelloway, 1998). The RMSEA also indicates good fit when values are below 0.10 (Hair et al., 2006). Additionally, below 0.05 is considered as very good fit (Kelloway, 1998). Along with the RMSEA is the measure of p of Close Fit (PCLOSE) (Kenny, 2014). This measure is used as a null hypothesis test to determine if the RMSEA is a close-fitting model, where a non-statistically significant result indicates that the model is close to fitting, whereas a statistically significant result (e.g. $p < 0.05$) suggests that the model fit is not close (Kenny, 2014), and thus is not good.

4.2.2.1.2 Establishing Model Fit

Model fit was examined using the proposed factor structure. In the proposed 6 factor model, there was poor model fit, as determined by model fit measures (Kelloway, 1998). A chi-square test indicated that the data did not fit the proposed model, χ^2 (974, N = 164) = 1791.94, $p < .00$. Other goodness of fit statistics also indicated poor model fit; these are listed in Table 4.12 below.

Kenny and McCoach (2003) address the issue that having more variables in a model leads to decreased model fit, as compared to models that have fewer variables. While their research takes into account multiple factors that may influence this, such as the increased likelihood of having "bad" variables as the overall number of variables increases (Kenny & McCoach, 2003), they find that a larger number of variables erodes model fit. Indeed, if the constructs are parceled or otherwise reduced so that the number of variables decreases, better model fit is possible. However, a piecemeal approach is not desirable and circumvents the point of statistical rigor (Kenny & McCoach, 2003). Thus, while it is possible to present the data in a way that fit scores could be improved, doing so is not an ideal approach from a statistical or ethical standpoint (Kenny & McCoach, 2003). Rather, Kenny and McCoach suggest "If the TLI and CFI seem slightly lower than hoped, but the RMSEA seems a bit better, then there may be no real cause for concern" (2003: 349).

As seen in Table 4.4, this is the pattern of improvement for the final model over the theorized model. Model fit was improved by examining items that did not load as expected in the theorized model. Kelloway draws attention to the fact that the desired cutoff levels for many fit indices are derived from experience, and when discussing GFI and other fit indices, states that these fit indices have "no known sampling distribution. As a result, 'rules' about when an index indicates a good fit to the data are highly arbitrary and should be treated with caution" (Kelloway, 1998: 27-28).

Others such as the GFI and NFI are improved from the 0.60 range to the 0.80 range, approaching the desired cutoff level 0.90. For the PGFI and PNFI, improvement

was seen in the second model, as is desired (Hair et al., 2006). Methods used to achieve improvements to model fit are discussed below.

Table 4.4 Model Fit Statistics

Model	n	Chi-Sq	p level	Df	CMIN/DF	GFI	AGFI	NFI
Theorized	164	1791.94	0	974	1.84	0.68	0.65	0.7
Improved	164	670.5	0	467	1.44	0.81	0.78	0.85

Model	CFI	TLI	PGFI	PNFI	RMR	RMSEA	PCLOSE
Theorized	0.83	0.82	0.62	0.66	0.08	0.07	0
Improved	0.95	0.94	0.68	0.75	0.05	0.05	0.37

4.2.2.1.3 Improvements to Model Fit

As the model fit for the CFA was not conducted as a part of scale development, but rather was completed using existing and validated scales, improvements to model fit were done with caution (cf. Hair et al., 2006). Through evaluation of the standardized regression weights of individual items in the constructs, items were removed from the model one by one, as the removal of one variable can change the effect of other variables in the model (Wuensch, 2014). This was done with careful consideration and with justification based on theory, face validity, or other reasons which will be specifically addressed (e.g. reverse coded items). Error terms of items were also evaluated, and error terms were "freed" such that error terms within each construct were allowed to covary (Kelloway, 1998). While the improved model fit achieved through this iterative process is reported above in Table 4.4, the specific items examined are reported below, including the impact model improvement had on scale reliability for the construct. Table 4.5 lists the standardized regression weights of the items retained.

Table 4.5 Standardized Regression Weights

OE1	0.85
OE2	0.64
OE3	0.62
OE4	0.73
OE5	0.77
OE8	0.69
LGO1	0.76
LGO2	0.88
LGO3	0.84
LGO4	0.77

AUTH1	0.66
AUTH3	0.68
AUTH5	0.68
AUTH9	0.74
AUTH11	0.80
AUTH13	0.76
AUTH15	0.64
TWBENV1	0.84
TWBENV2	0.84
TWBENV3	0.67
TWBENV4	0.90
TWBENV5	0.89

TWABIL1	0.82
TWABIL2	0.86
TWABIL3	0.80
TWABIL4	0.90
TWABIL5	0.90
TWABIL6	0.91
TWINTG1	0.78
TWINTG2	0.90
TWINTG3	0.86
TWINTG5	0.81
TWINTG6	0.78

For the construct Openness to Experience, items OE1, OE2, OE3, OE4, OE5, and OE8 were retained (α= 0.87). The items OE7 and OE9 were both reverse coded items, and did not perform well. Similarly, OE6 and OE10 were items that referred to art, and as such seemed to have more in common with each rather than with the rest of the items.

For the learning goal orientation (LGO) construct, LGO5 demonstrated a low standardized regression weight as compared to the other items. All other items had regression weights of 0.76 or higher. After removing LGO5, this left a 4 item LGO scale (α=0.88).

The authoritarianism scale, initially a 15 item scale, retained 7 items. The reverse coded items had low standardized regression weights, as did AUTH7. Due to the nature of the reverse coded items, it is not surprising that these had low weights. The low weight of AUTH7 was unexpected. However, upon inspection of the items, it appears that AUTH7 ("It would be best if newspapers were censored so that people would not be

able to get hold of destructive and disgusting material.") and AUTH12r ("It is better to accept bad literature than to censor it.") had more in common with each other due to their shared theme of censorship. Thus AUTH7 and the reverse coded items were dropped from the model, and it retained high reliability with 7 items (α=0.88).

It should be noted that while the authoritarianism scale is presented in previous research as a unidimensional scale (e.g. Altemeyer, 1996), other researchers have experienced similar issues with the scale breaking into two or three factors, similar to the issues found with the present data. Mavor, Louis, & Sibley (2010) specifically address this issue, and in their factor analysis find three facets in the authoritarianism scale, as opposed to Altemeyer's proposed unidimensional scale (Mavor et al., 2010). The scale used for this research was a 15 item scale that, in addition to being shortened for usability, attempted to correct for some of the issues found with the longer scale (Zakrisson, 2005). However, replicating Mavor and colleague's (2010) principal axis factoring with promax rotation using the existing data produced a three factor structure as well. Thus, while the scale did not indicate a factor loading with all 15 items on one factor, this finding is not unprecedented.

Trustworthiness is one construct that can be broken into three subscales, ability, benevolence, and integrity (Mayer et al., 1995). The standardized regression weights indicated that only the reverse coded item, TWINT4r, did not fit with other items and thus was excluded from the CFA model. The five item TWINTG scale retained high reliability (α=0.91).

Lastly, the social distance scale was excluded from the CFA as the individual items are not all latent variables reflecting one construct. The items of the social distance

reflect an escalating level of comfort by decreasing the amount of hypothetical social distance. Thus, while the scale has reliability in that the items measure the same construct (social distance), the true value or usefulness of this scale is not found in multiple items converging on a singular construct, but rather the "breaking point" where the respondent goes from being comfortable to not being comfortable with amount of proposed social distance between him or herself and the subject. For this group of respondents as an aggregate, this break happens approximately between SD5 ("Would you recommend someone like the trainer for a job working for a friend of yours?") and SD6 ("Would you let someone like the trainer take care of your children for a couple of hours?), as evidenced by a factor analysis on the construct.

Table 4.6 Social Distance Factor Analysis

Social Distance 1	0.90	
Social Distance 2	0.90	
Social Distance 3	0.83	
Social Distance 4	0.79	*0.44*
Social Distance 5	0.70	*0.49*
Social Distance 6		0.82
Social Distance 7		0.84
Social Distance 8	*0.47*	0.70
Social Distance 9		0.82

In sum, these iterative changes to the latent variables for the constructs lead to improved and acceptable model fit. Accordingly, the constructs derived from the items retained in the improved CFA (see Table 4.4) will be used for hypothesis testing in the following section.

4.3 Descriptive Statistics

Hypotheses from Chapter 3 were tested as proposed. Hypothesis testing only included responses that correctly identified whether or not the trainer had a tattoo. This restriction was made due to the nature of the research question and hypotheses, which rely on subject reactions to visible tattooing. The results of the hypotheses tests are reported below. Means, standard deviations, and correlations of the study variables used in hypothesis testing are reported below in Tables 4.7 and 4.8. Measures related to the manipulation, such as learning, are not included in these tables, as responses varied between study conditions. Table 4.9 reports the results of independent samples t-tests between the student and AMT sample. Table 4.10 presents correlations between the dependent variables based on treatment groups.

Table 4.7 Means and Standard Deviations of Study Variables

	Student		AMT		Total	
	Mean	SD	Mean	SD	Mean	SD
1. Age	24.22	5.08	38.68	11.43	33.13	11.82
2. Gender	---	---	---	---	---	---
3. Race	---	---	---	---	---	---
4. Education	---	---	---	---	---	---
5. Number of Tattoos	1.08	2.15	1.28	2.45	1.20	2.33
6. Social Distance	4.00	1.12	4.64	1.34	4.40	1.29
7. Openness to Experience	3.93	0.61	4.06	0.73	4.01	0.69
8. Authoritarianism	3.10	0.80	2.94	0.93	3.00	0.88
9. LGO	4.10	0.48	4.02	0.77	4.05	0.67
10. Trustworthiness- Ability	3.34	0.76	3.63	0.92	3.52	0.87
11. Trustworthiness- Benevolence	2.99	0.73	3.17	0.78	3.10	0.77
12. Trustworthiness - Integrity	3.18	0.63	3.36	0.66	3.30	0.65

Table 4.8 Correlations of Study Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Age	---										
2. Gender	0.10	---									
3. Race	0.04	-0.08	---								
4. Education	0.05	-0.22**	-0.09	---							
5. Number of Tattoos	-0.13	0.16*	0.08	-0.11	---						
6. Social Distance	0.13+	0.16*	-0.07	-0.03	0.16*	---					
7. Openness to Experience	-0.03	-0.12	-0.01	0.11	0.11	0.05	---				
8. Authoritarianism	-0.10	-0.02	-0.14+	-0.10	-0.11	-0.12	-0.05	---			
9. LGO	-0.17*	-0.10	-0.10	0.14+	0.15+	0.01	0.62***	0.07	---		
10. Trustworthiness- Ability	0.23***	0.19*	-0.13	-0.11	-0.01	0.55***	-0.02	0.10	-0.02	---	
11. Trustworthiness- Benevolence	0.03	0.09	-0.19*	-0.11	0.10	0.60***	0.10	0.16*	0.03	0.66***	---
12. Trustworthiness - Integrity	0.07	0.11	-0.06	-0.07	0.04	0.67***	0.09	0.09	0.08	0.74***	0.77***

+ $p < 0.1$
* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

A comparison of the descriptive statistics for the student and Mechanical Turk samples revealed that, for most of the variables in the study, there were not significant differences between the two samples. The difference in age was not unexpected; rather, it was desirable. The difference in race is not surprising, as the student sample was more homogenous than the Mechanical Turk sample.

Table 4.9 Comparison of Samples

	T-Test for Equality of Means			
	t	df	Mean Difference	Std. Error Difference
Age	-9.47***	162	-14.46	1.53
Education	-0.71	162	-0.14	0.20
Number of Tattoos	-0.53	162	-0.20	0.38
Social Distance	-3.15**	162	-0.64	0.20
Openness to Experience	-1.21	162	-0.13	0.11
Authoritarianism	1.08	162	0.15	0.14
LGO	0.69	162	0.07	0.11
Trustworthiness- Ability	-2.07*	162	-0.29	0.14
Trustworthiness- Benevolence	-1.49	162	-0.18	0.12
Trustworthiness - Integrity	-1.73^{+}	162	-0.67	0.10

$^{+}$ $p < 0.1$
* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

It is noteworthy that trends regarding tattoos were not different between the two samples, despite the age difference. Study variables that were different were social distance, ability, and integrity. For the trustworthiness integrity measure, the difference was significant (c.f. Albright, Winston, & Zappa, 2000). For all three of these variables, there may be some variation due to age. For instance, as the AMT group was older than the student group, age may influence how they perceived the ability of the trainer.

Similarly, this age difference may have also influenced their perceptions of social distance when answering items such as "Would you share an apartment with someone like the trainer?" Thus, while some differences do exist, it is not anticipated that they are problematic. Rather, the difference in age in the two samples is intended to reduce bias.

As the independent variable for this study was categorical, it was dummy coded for use in regression (Cohen et al., 2003). As described in Chapter 3.10, the independent variable was also coded to have a zero correlation between the control and experimental groups, as well as to create a contrast to explore the difference between the two treatment groups (Stockburger, 1996). An example of both coding methods is provided below:

Table 4.10 Categorical Variable Coding Methods

Dummy Coding			Contrast Coding		
Category	X_1	X_2	Category	Control	1vsSleeve
1 Tattoo	1	0	1-Tattoo	1	$1/N_1$
Full Sleeve	0	1	Full Sleeve	1	$1/N_2$
Control	0	0	Control	-2	0

This contrast coding, along with its correlation to the trustworthiness measures and post-test gain scores are presented in Table 4.10 below. This table presents the correlations between the independent and dependent variables, based on condition. Based on these correlations, there is no relationship between the treatment groups and dependent variables.

Table 4.11 Condition Contrasts and Dependent Variable Correlations

	1.	2.	3.	4.	5.
1. Control	--				
2. 1vsSleeve	.00	--			
3. Ability	.01	-.09	--		
4. Benevolence	.01	-.06	.62**	--	
5. Integrity	.01	-.09	.65**	.75**	--
6. Gain Score	-.03	.00	.01	-.09	-.05

**. Correlation is significant at the 0.01 level (2-tailed)

As previously noted, hypothesis testing was conducted using responses that correctly answered the treatment check of whether or not the trainer had tattoos. Group means between the student and AMT responses are reported below in Table 4.11. For respondents exposed to the control, there was a significant difference between the student and AMT groups based on correct and unsure responses. There was also a significant difference in unsure responses for the 1-Tattoo group. As the data suggests, it is worth noting those in the AMT group had a higher rate of correct responses in the control, as compared to the student group. This difference may be explained by the nature of Amazon Mechanical Turk. The AMT structure is such that respondents are paid upon completion of the survey. Many research surveys hosted on the site only pay if the respondent passes all attention checks. As such, AMT respondents may be more likely to pay attention and answer attention or treatment checks correctly, as their payment for completing the survey depends upon it.

Another possible explanation, which was previously discussed with Table 4.2 is that the nature of the item "The trainer had a tattoo" does not exclude the possibility the trainer had a tattoo which was not visible. While it is outside the bounds of this research,

it is possible that the younger student group might make this assumption more than the slightly older AMT group.

Aside from the control group, group means were not significantly different for the correct response for either of the tattoo conditions. Given the similarity of response for the two experimental conditions, and the fact that the difference in the control group can be attributed to the fact that more respondents from the student group were unsure rather than incorrect, the two groups were combined for hypothesis testing.

Table 4.12 "The trainer had a tattoo" Comparisons by Sample Group

	Correct			Incorrect			Unsure		
	df	t	p	df	t	p	df	t	p
Control	86	3.05	0.00	86	-1.10	0.28	86	-2.79	0.00
1-Tattoo	93	1.03	0.31	93	1.46	0.15	93	-2.36	0.02
Sleeves	90	1.31	0.19	90	-0.71	0.48	90	-1.04	0.30

4.3.1 Impact of Visible Tattoos on Perceived Trustworthiness

Hypothesis 1 proposed that visible trainer tattoos would lead to decreased perceived trustworthiness. To test this hypothesis, MANCOVA was used (Hair et al., 2006; Cohen et al., 2003). Perceived trustworthiness is measured with three subscales and thus necessitates a MANCOVA (Hair et al., 2006). While perceived trustworthiness is the larger order construct, its three individual facets have been used separately in previous research (c.f. Colquitt & Rodell, 2011) to further distinguish the specific mechanisms of trustworthiness. Accordingly, this research follows that precedent in examining trustworthiness as three individual facets that comprise a larger construct. In

this test, controls of age, gender, education level, race, and number of tattoos were added as covariates.

Hypothesis 1 was not supported. Based on treatment group, perceived ability did not differ ($F(2)=.24$, $p > 0.10$). Similarly, there are not significant results for the benevolence ($F(2)=2.03$, $p > 0.10$), or integrity measures of trustworthiness ($F(2)=1.73$, $p > 0.10$) based on treatment group. Thus, hypothesis 1 was not supported. Group means are reported in Table 4.12 below.

Additional analyses compared the control group to both tattoo conditions combined, finding no significant differences based on ability ($F(1)=0.02$, $p > 0.10$), benevolence ($F(1)=0.31$, $p > 0.10$) or integrity ($F(1)=0.24$, $p > 0.10$). Likewise, contrast tests for comparisons between groups (Cohen et al., 2003) did not indicate any significant differences between groups. These are reported in Table 4.13 below. When all of the above listed variables are controlled for, visible tattoos do not directly influence perceived trustworthiness. These findings will be further discussed in Chapter 5.

Table 4.13 Trustworthiness Group Means by Condition

		Ability	Benevolence	Integrity
Control	Mean	3.49	3.04	3.33
	Std. Dev.	0.90	0.76	0.73
1 Tattoo	Mean	3.47	3.00	3.17
	Std. Dev.	0.83	0.76	0.62
Full Sleeves	Mean	3.58	3.22	3.38
	Std. Dev.	0.87	0.76	0.65

Table 4.14 Comparisons of Trustworthiness Group Means by Condition

	Ability			Benevolence			Integrity		
	df	t	p	df	t	p	df	t	p
Control vs Experimental	162	-0.23	0.82	162	-0.53	0.60	162	0.49	0.62
Control vs 1 Tattoo	162	0.13	0.90	162	0.25	0.80	162	1.23	0.22
Control vs Full Sleeves	162	-0.55	0.58	162	-1.22	0.22	162	-0.37	0.72
1 Tattoo vs Full Sleeves	162	-0.75	0.45	162	-1.64	0.10	162	-1.88	0.07

4.3.2 Moderation of Social Distance on Visible Tattoos and Perceived Trustworthiness

While the test for an impact of visible tattoos on perceived trustworthiness yielded non-significant results, hypotheses 2, 3, and 4 add moderators to the relationship. To test this, hierarchical regression (Hair et al., 2006) was used to include all moderating variables. Control variables were entered into the model first, followed by the dummy coded treatment group variables (Stockburger, 1996), the mean-centered moderators, and lastly the interaction (or moderator) terms (Hair et al., 2006). The moderators were mean-centered to reduce collinearity (c.f. Dalal & Zickar, 2012).

Hypothesis 2, which focused on social distance, was partially supported. For the ability measure of trustworthiness (see Table 4.14 below), analysis indicated no statistical significance for the interaction of social distance and experimental condition of 1 tattoo ($\beta = -0.15$, $p > 0.10$). The interaction between social distance and the full sleeves condition (see Figure 4.1) was significant ($\beta = -0.22$, $p < 0.10$). This interaction supports the hypothesis in that the perception of ability decreased when those with high social distance were exposed to the full sleeves condition, and the perception of ability increased when those with low social distance were exposed to the same condition. It is noted that the relationship between social distance and the dependent variable was

statistically significant (β= 0.53, p < 0.00); this simply indicates that as subjects were more socially accepting of the trainer, they perceived him to be trustworthy, which is not unexpected.

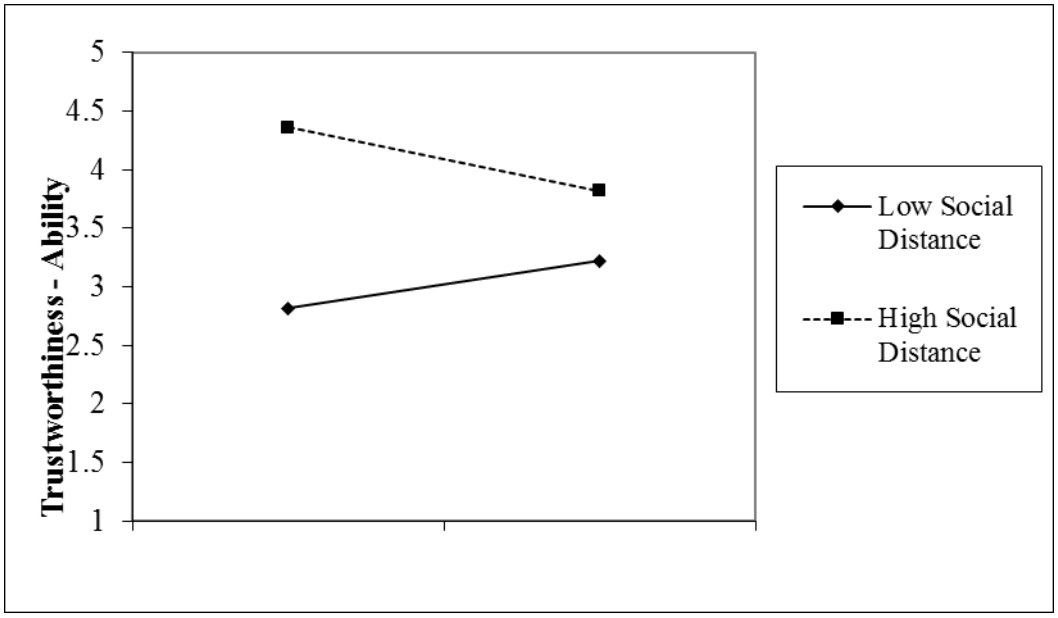

Figure 4.1 Interaction of Full Sleeves Condition and Social Distance on Ability

For the benevolence measure of trustworthiness (see Table 4.15 below), findings were non-significant for the 1 tattoo condition (β= -0.05, p > 0.10) and the full sleeves condition (β= -0.09, p > 0.10). Again, social distance alone was significant (β= 0.40, p < .00), as expected.

For the integrity measure of trustworthiness (see Table 4.16 below), the interaction effect was significant for the 1 tattoo condition (β= -0.18, p < 0.05; see Figure 4.2 below) and the full sleeves condition (β= -0.22, p < 0.01; see Figure 4.3 below). These results support the hypothesized relationship, as high social distance led to

decreased perceived integrity in both conditions. Social distance was also significant (β= 0.51, $p < 0.00$). The R^2 and change in R^2 for this measure are reported below in Table 4.16. Based on the findings for the interaction effect with the ability and integrity measures of trustworthiness, hypothesis 2 is partially supported.

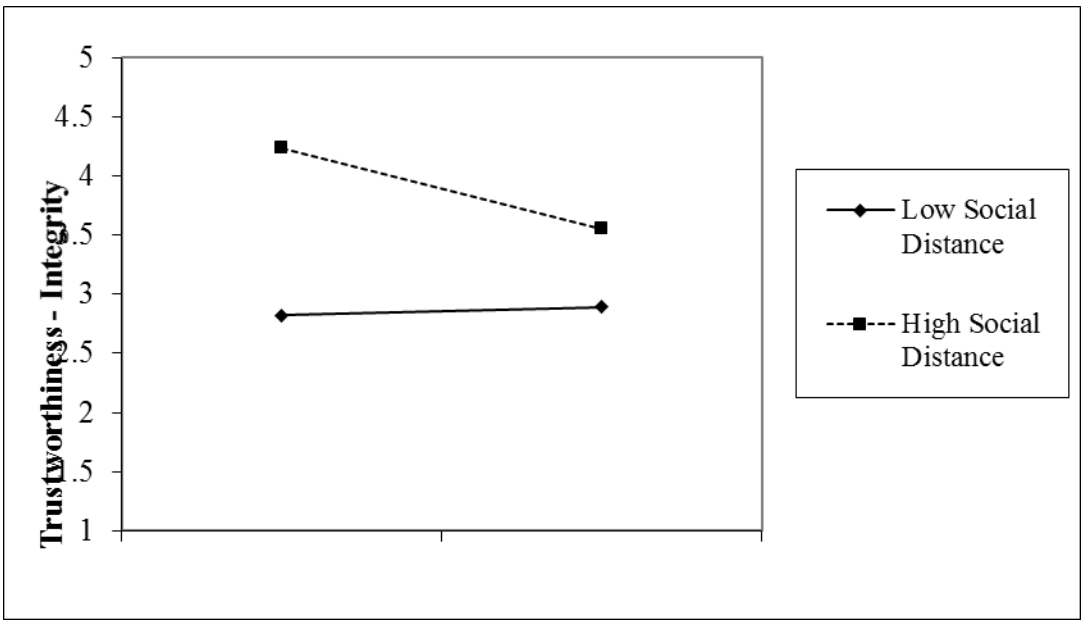

Figure 4.2 Interaction of One Tattoo Condition and Social Distance on Integrity

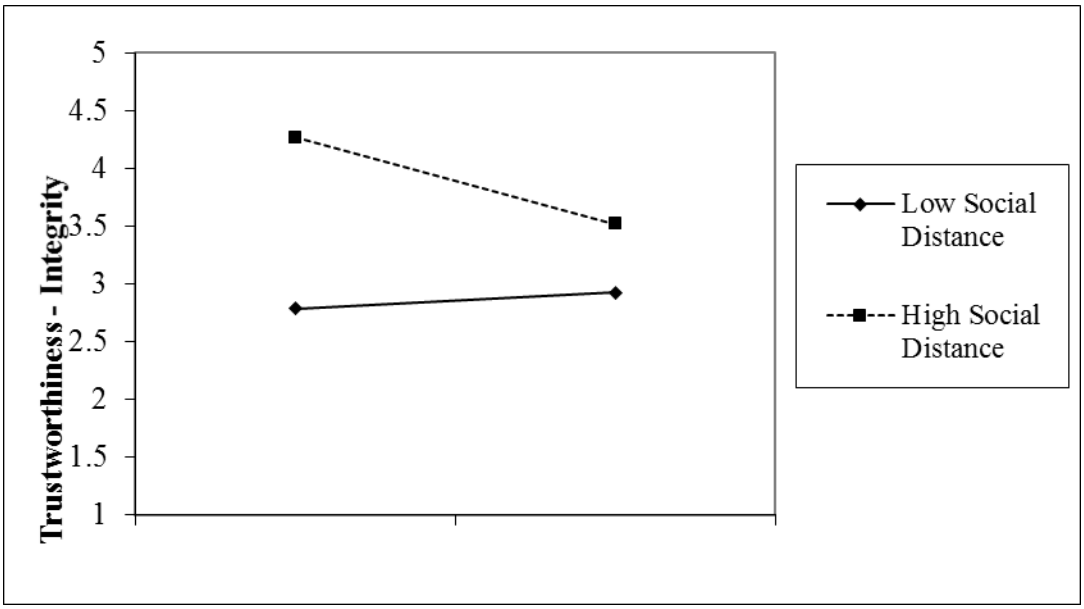

Figure 4.3 Interaction of Full Sleeves Condition and Social Distance on Integrity

4.3.3 Moderation of Openness to Experience on Visible Tattoos and Perceived Trustworthiness

Hypothesis 3 was tested by including openness to experience as a moderator to the model, as was done with social distance for hypothesis 2. Once again, the same hierarchical regression (Hair et al., 2006) is used to assess the impact of the interaction of treatment group and openness to experience on the three trustworthiness dependent variables. The model process was described with hypothesis 2.

Hypothesis 3 was not supported. The ability measure of trustworthiness (see Table 4.14 below) received no support. The interaction terms for both experimental conditions of 1 tattoo (β= 0.17, $p > 0.10$) and full sleeves (β= -0.13, $p > 0.10$), were not significant. The benevolence measure of trustworthiness (see Table 4.15 below) did not have statistically significant moderation effect for the 1 tattoo (β= 0.14, $p > 0.10$) or full sleeves (β= 0.23, $p > 0.10$) conditions. For the integrity measure of trustworthiness (see

Table 4.16 below), the interaction effect was also not significant for both the 1 tattoo condition ($\beta = 0.11$, $p > 0.10$) and the full sleeves condition ($\beta = 0.06$, $p > 0.10$). Based on the findings for the interaction effect with the three measures of trustworthiness, hypothesis 3 is not supported.

4.3.4 Moderation of Authoritarianism on Visible Tattoos and Perceived Trustworthiness

Hypothesis 4 was tested by the interaction of authoritarianism with the treatment group. It was tested by including authoritarianism as a moderator to the model. Hierarchical regression (Hair et al., 2006), as discussed with hypothesis 2, was used to assess the impact of the interaction of treatment group and authoritarianism on the three trustworthiness dependent variables.

Hypothesis 4 was not supported. The ability measure of trustworthiness received no support. The interaction terms were lower than the control (i.e. intercept) for both experimental conditions of 1 tattoo ($\beta = -0.18$, $p > 0.10$) and full sleeves ($\beta = -0.07$, $p > 0.10$), but not significantly so. The relationship between authoritarianism and ability was significant ($\beta = 0.25$, $p < 0.10$).

The benevolence measure of trustworthiness also received no support. The interaction terms were not statistically significant for both experimental conditions of 1 tattoo ($\beta = -0.09$, $p > 0.10$) and full sleeves ($\beta = -0.13$, $p > 0.10$). Again, the relationship between authoritarianism and benevolence was significant ($\beta = 0.26$, $p < 0.05$). Lastly, the integrity measure of trustworthiness also received no support. The interaction terms for both experimental conditions of 1 tattoo ($\beta = -0.05$, $p > 0.10$) and full sleeves ($\beta = 0.02$, $p > 0.10$) were not statistically significant. Thus, hypothesis 4 can be rejected.

Table 4.15 Regression Results on Trustworthiness - Ability

Variable	Model 1	Model 2	Model 3	Model 4
Intercept	3.45***	3.47***	3.40***	3.50***
	(0.49)	(0.52)	(0.44)	(0.45)
Control				
Age	0.02**	0.02**	0.01*	0.01*
	(0.01)	(0.01)	(0.00)	(0.00)
Gender	0.24^{+}	0.24^{+}	0.15	0.16
	(0.14)	(0.14)	(0.12)	(0.12)
Race	-0.11^{+}	-0.11^{+}	-0.05	-0.07
	(0.06)	(0.06)	(0.05)	(0.05)
Education	-0.07	-0.07	-0.05	-0.05
	(0.06)	(0.06)	(0.05)	(0.05)
Number of Tattoos	0.00	0.00	-0.03	-0.03
	(0.03)	(0.03)	(0.03)	(0.03)
Predictor				
1 Tattoo Condition		-0.03	0.00	-0.02
		(0.17)	(0.15)	(0.15)
Full Sleeves Condition		0.07	-0.06	-0.04
		(0.17)	(0.14)	(0.14)
Social Distance			0.37***	0.53***
			(0.04)	(0.11)
Openness to Experience			-0.01	0.00
			(0.08)	(0.15)
Authoritarianism			0.16*	0.25^{+}
			(0.07)	(0.14)
1 Tattoo x Social Distance				-0.15
				(0.13)
Full Sleeves x Social Distance				-0.22^{+}
				(0.12)
1 Tattoo x Openness				0.17
				(0.20)
Full Sleeves x Openness				-0.13
				(0.21)
1 Tattoo x Authoritarianism				-0.18
				(0.17)
Full Sleeves x Authoritarianism				-0.07
				(0.17)

Table 4.15 (continued)

	Model 1	Model 2	Model 3	Model 4
R^2	0.11	0.11	0.39	0.42
ΔR^2	0.11	0.00	0.28	0.03
F	3.76**	0.24	22.93***	1.26
n	164	164	164	164

Note: Standard error estimates are reported in parentheses.
$^{+}$ $p < 0.1$
* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

Table 4.16 Regression Results on Trustworthiness – Benevolence

Variable	Model 1	Model 2	Model 3	Model 4
Intercept	3.91***	3.94***	3.85***	3.82***
	(0.45)	(0.46)	(0.37)	(0.38)
Control				
Age	0.00	0.00	0.00	0.00
	(0.01)	(0.01)	(0.00)	(0.00)
Gender	0.04	0.03	-0.04	-0.01
	(0.12)	(0.12)	(0.10)	(0.10)
Race	-0.15**	-0.16**	-0.09*	-0.10*
	(0.06)	(0.06)	(0.05)	(0.05)
Education	-0.07	-0.07	-0.06	-0.05
	(0.05)	(0.05)	(0.04)	(0.04)
Number of Tattoos	0.03	0.04	0.01	0.01
	(0.03)	(0.03)	(0.02)	(0.02)
Predictor				
1 Tattoo Condition		-0.06	-0.04	-0.04
		(0.15)	(0.12)	(0.13)
Full Sleeves Condition		0.20	0.05	0.05
		(0.15)	(0.12)	(0.12)
Social Distance			0.36***	0.40***
			(0.04)	(0.09)
Openness to Experience			0.09	-0.02
			(0.07)	(0.13)
Authoritarianism			0.17**	0.26*
			(0.05)	(0.12)

Table 4.16 (continued)

	Model 1	Model 2	Model 3	Model 4
1 Tattoo x Social Distance				-0.05
				(0.11)
Full Sleeves x Social Distance				-0.09
				(0.11)
1 Tattoo x Openness				0.14
				(0.17)
Full Sleeves x Openness				0.23
				(0.18)
1 Tattoo x Authoritarianism				-0.09
				(0.15)
Full Sleeves x Authoritarianism				-0.13
				(0.14)
R^2	0.07	0.09	0.44	0.45
ΔR^2	0.07	0.02	0.35	0.01
F	2.23^{+}	2.03	31.82***	0.55
n	164	164	164	164

Note: Standard error estimates are reported in parentheses.
$^{+}$ $p < 0.1$
* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

Table 4.17 Regression Results on Trustworthiness - Integrity

Variable	Model 1	Model 2	Model 3	Model 4
Intercept	3.31***	3.44***	3.41***	3.43***
	(0.39)	(0.40)	(0.30)	(0.30)
Control				
Age	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Gender	0.11	0.09	0.02	0.05
	(0.11)	(0.11)	(0.08)	(0.08)
Race	-0.04	-0.05	0.01	0.00
	(0.05)	(0.05)	(0.04)	(0.04)
Education	-0.03	-0.03	-0.02	-0.02
	(0.04)	(0.04)	(0.03)	(0.03)
Number of Tattoos	0.01	0.01	-0.02	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Predictor				
1 Tattoo Condition		-0.17	-0.15	-0.15
		(0.13)	(0.10)	(0.10)
Full Sleeves Condition		0.04	-0.10	-0.09
		(0.13)	(0.10)	(0.10)
Social Distance			0.35***	0.51***
			(0.03)	(0.07)
Openness to Experience			0.08	0.05
			(0.06)	(0.10)
Authoritarianism			0.12**	0.14
			(0.04)	(0.09)
1 Tattoo x Social Distance				-0.18*
				(0.09)
Full Sleeves x Social Distance				-0.22**
				(0.08)
1 Tattoo x Openness				0.11
				(0.14)
Full Sleeves x Openness				0.06
				(0.14)
1 Tattoo x Authoritarianism				-0.05
				(0.12)
Full Sleeves x Authoritarianism				0.02
				(0.11)

Table 4.17 (continued)

	Model 1	Model 2	Model 3	Model 4
R^2	0.02	0.05	0.49	0.53
ΔR^2	0.02	0.02	0.45	0.03
F	0.78	1.73	45.29***	1.63
n	164	164	164	164

Note: Standard error estimates are reported in parentheses.
$^{+}$ $p < 0.1$
* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

4.3.5 Relationship between Perceived Trustworthiness and Learning

The direct relationship between trustworthiness and learning was tested using hierarchical regression (Hair et al., 2006). As with earlier hypotheses, control variables were entered first. For this test, treatment group was also used as a control. The three trustworthiness measures were entered in the second block, and the difference between the pre-test and post-test score (i.e. gain score) was used as the dependent variable to measure learning. The group means for learning are reported below in Table 4.17, as are the t-tests of mean comparison for the student and AMT groups.

Table 4.18 Learning Group Means by Condition and Sample

		Total	Student	AMT	df	t	p
Control	Mean	4.18	3.55	4.41	38	-0.94	0.35
	Std. Dev.	2.60	2.34	2.69	---	---	---
1 Tattoo	Mean	3.88	4.25	3.62	56	0.92	0.36
	Std. Dev.	2.58	2.59	2.57	---	---	---
Full Sleeves	Mean	3.73	2.79	4.42	64	-2.30	*0.03*
	Std. Dev.	2.94	3.11	2.65	---	---	---
All Conditions Combined	Mean	3.89	3.48	4.15	162	-1.54	0.13
	Std. Dev.	2.73	2.83	2.64	---	---	---

Hypothesis 5 was not supported (see Table 4.18 below). For all three measures of trustworthiness, there were no statistically significant relationships with learning. The results for ability ($\beta = 0.22$, $p > 0.10$), benevolence ($\beta = -0.11$, $p > 0.10$), and integrity ($\beta = -0.12$, $p > 0.10$) were all non-significant. Thus, hypothesis 5 was rejected.

Table 4.19 Regression Results on Trustworthiness and Learning

Variable	Model 1	Model 2	Model 3	Model 4
Intercept	2.27	2.64	2.68	2.51
	(1.70)	(2.06)	(2.05)	(2.08)
Control				
Age	0.03^{+}	0.03	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Gender	0.23	0.20	0.14	0.12
	(0.45)	(0.46)	(0.46)	(0.46)
Race	0.07	0.08	0.03	0.02
	(0.20)	(0.21)	(0.21)	(0.22)
Education	0.04	0.04	0.07	0.07
	(0.18)	(0.18)	(0.18)	(0.18)
Number of Tattoos	0.17^{+}	0.18^{+}	0.20*	0.20*
	(0.09)	(0.10)	(0.10)	(0.10)
Experimental Condition	-0.21	-0.20	-0.13	-0.09
	(0.27)	(0.28)	(0.28)	(0.29)
Predictor				
Ability		0.24	0.22	0.22
		(0.40)	(0.40)	(0.40)
Benevolence		-0.06	-0.12	-0.11
		(0.47)	(0.47)	(0.47)
Integrity		-0.31	-0.18	-0.12
		(0.60)	(0.60)	(0.62)
Learning Goal Orientation			-0.49	0.66
			(0.34)	(1.68)
Ability X LGO				-0.06
				(0.63)
Benevolence X LGO				0.40
				(0.68)
Integrity X LGO				-0.65
				(0.99)
R^2	0.04	0.05	0.06	0.07
ΔR^2	0.04	0.00	0.01	0.01
F	1.22	0.17	2.02	0.29
n	164	164	164	164

Note: Standard error estimates are reported in parentheses.
$^{+}$ $p < 0.1$
* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$

4.3.6 Moderation of Learning Goal Orientation on Perceived Trustworthiness and Learning

Hypothesis 6 was tested with hierarchical regression (Hair et al., 2006) to assess the moderating influence of a learning goal orientation on the relationship between perceived trustworthiness and learning, as was measured by the score improvement between the pre-test and post-test. An interaction term was created with the three measures of trustworthiness and LGO. Control variables remain as the same as before, including controlling for treatment group.

Hypothesis 6 was not supported (see Table 4.18 above). The ability measure of trustworthiness received no support. The interaction term for ability and learning goal orientation was not significant (β= -0.06, $p > 0.10$). The interaction between the benevolence measure of trustworthiness and LGO also received no support (β= 0.68, $p > 0.10$). Lastly, the integrity measure of trustworthiness received no support. The interaction terms integrity and LGO (β= -0.65, $p > 0.10$) was not statistically significant. Thus, hypothesis 6 was rejected.

4.3.7 Mediation of Perceived Trustworthiness on the Relationship between Visible Tattoos and Learning

The model proposed included perceived trustworthiness as a mediator of the relationship between visible tattoos and learning. This mediation was tested using the method established by Preacher and Hayes (2004). Mediation was not supported with any of the three proposed trustworthiness mediators of ability (0.53, $p > 0.10$), benevolence (-0.06, $p > 0.10$), or integrity (-0.50, $p > 0.10$).

4.3.8 Post-Hoc Analysis

As gender was a dichotomous covariate in the model for Hypothesis 1, it was also tested post-hoc as an interaction variable. The interaction between treatment group and gender was significant ($F(6,302)= 2.29$, $p < 0.05$). The rationale for why this interaction may be significant is discussed in Chapter 5.

Furthermore, for the ability measure of trustworthiness, the interaction of treatment group and gender ($F(2,1)=5.21$, $p < 0.01$) was significant. However, as discussed in Chapter 3, observed power ideally should be below 0.80 (Hair et al., 2006). For this test, observed power was 0.82.

4.4 Analysis Results

One of the six hypotheses in the study received partial support. The findings for the hypotheses are summarized in Table 4.19 below. These findings will be further discussed in Chapter 5.

Table 4.20 List of Hypotheses Test Results

Hypotheses		Result
H1	Visible trainer tattoos will be negatively related to perceived trustworthiness.	Not Supported
H2	Social distance will moderate and strengthen relationship between visible tattoos and perceived trustworthiness.	Partial Support
H3	Openness to Experience will moderate and weaken relationship between visible tattoos and perceived trustworthiness.	Not Supported
H4	Authoritarianism will moderate and strengthen relationship between visible tattoos and perceived trustworthiness.	Not Supported
H5	Perceived trustworthiness of a trainer will be directly (positively) related to learning.	Not Supported
H6	Learning goal orientation will moderate and strengthen the relationship between perceived trustworthiness and learning.	Not Supported

CHAPTER V

DISCUSSION and CONCLUSION

The purpose of this chapter is to discuss the results of the hypotheses tests reported in Chapter 4. This chapter will also discuss contributions of the study and its limitations, as well as recommendations for future research.

5.1 Discussion of Results

The purpose of this dissertation was to test the effect of visible tattooing on perceived trustworthiness and learning in a training context. Six hypotheses were developed to test these relationships, as well as to test the moderating effect of additional personality variables, which will be further discussed below.

5.1.1 Hypothesis 1: Relationship between Visible Tattoos and Perceived Trustworthiness

The first hypothesis addressed the link between the subject of interest, visible tattoos, and an outcome of interest, trustworthiness (Mayer et al., 1995). This hypothesis was rejected, as there was no empirical support for a relationship between treatment group and any of the three trustworthiness subscales of ability, benevolence, and integrity (Mayer et al., 1995). Given that 70.5% of the full sample (n=275) correctly identified whether or not that trainer had a tattoo, the manipulation worked as intended. Thus, the lack of empirical support for this hypothesis suggests the presence of visible tattoos does not have a significant impact on perceptions of trustworthiness. This finding alone is

noteworthy, as it is counter to observed attitudes and behaviors previously reported in workplace surveys (Brallier et al., 2011; Miller et al. 2009).

A possible explanation for this finding is that tattoos have become more prevalent in mainstream society such that they are no longer novel and overly-stigmatized. While they may still carry some stigma (e.g. Kosut, 2006), tattoos have become part of popular culture in recent years (Braverman, 2012). Television shows such as Miami Ink, Ink Master, and Tattoo Nightmares (Saraiya, 2014) increase the visibility of tattoos, and heavily tattooed celebrities such as Adam Levine and Angelina Jolie are often in the public eye. Given the increased visibility, it is possible that societal norms have shifted and spread through imitation (cf. Cialdini & Trost, 1998).

Returning to the discussion of attribution theory (Fiske & Taylor, 1991) introduced in Chapter 2, it is possible that attributions made about tattoos and the reasons why a person has one (or many) may have shifted due to changing societal norms. While it was anticipated that the stigmatization associated with visible body modification would be salient, it is possible that attributions have shifted. Instead of associating tattoos with insidious motives as in the past (Kosut, 2006), tattoos may be more attributed to influences of popular culture. Furthermore, as Burgess and Clark (2010) noted, some people with tattoos are viewed as being similar to those with no tattoos if the subject of their tattoos is seen as cute. The trainer in this study had an abstract tribal-style tattoo in the 1 tattoo condition (as shown in Appendix D), and a variety of tattoos in the full-sleeves condition, which included a sea motif, feathers, and scenery featuring a large pumpkin on the other (as shown in Appendix D). While his tattoos may not fall in the category of "cute", they may still be innocuous in that they still signal a mainstream

identity (cf. Koch et al., 2010). If this is the case, then consistent with Burgess and Clark (2010), conditions where he is tattooed may be viewed the same as the control condition where he was not tattooed.

5.1.2 Hypothesis 2: Social Distance as a Moderator for Visible Tattoos and Perceived Trustworthiness

This hypothesis proposed that as social distance increases between the respondent and trainer, the interaction of social distance with visible tattoos on the trainer would influence trustworthiness. Specifically, it was proposed that increased social distance would lead to a decrease in trustworthiness. This hypothesis received partial support, with the interaction of social distance and integrity influencing trustworthiness in the hypothesized direction.

Social distance, as explained in Chapter 2, measures the amount of comfort a person has with another person. A higher social distance score indicates a higher level of comfort or tolerance of social contact (St-James et al., 2006). It was hypothesized that the amount of social distance between the respondent and the trainer would enhance the effect of visible tattoos on trustworthiness. As detailed in hypothesis 1, the direct relationship between the independent and dependent variable was not supported. Similarly, no support was found for the moderating effect of social distance on ability or benevolence.

Examining the individual facets of trustworthiness, the lack of a significant result for the measure of ability may be explained by the fact that, despite social distance existing between the trainer and subject, his prescribed role as the trainer is enough to establish ability, as this measure of trustworthiness is focused on competency (Mayer et

al., 1995). The trainer is presented as a representative of the bank, which may suggest ability based on the inference that there is a reason why he was chosen to lead the training. Furthermore, he is presenting pre-scripted material, which may also signal that he had the ability to transmit that information, and consequently could be trusted.

The lack of significance for the moderating effect on benevolence may also be influenced by perceptions that the trainer is a representative of a bank. Benevolence is focused on the perception that the trainer will act in good faith on the behalf of the trainee (Mayer et al., 1995). Given the training context of the study, it is reasonable that a subject might evaluate the trainer's benevolence based on his role as a trainer, rather than on other attributes.

The moderating effect of social distance on the third facet, integrity, was significant, and the beta coefficients indicate that the moderation did lead to decreased trustworthiness in terms of perceived integrity of the trainer. The moderation was significant for both the 1 tattoo and full sleeves conditions, with the beta for the full sleeves condition being slightly larger than that of the 1 tattoo condition. This suggests that the interaction of social distance led to a lower assessment of integrity.

This finding follows expectations, as the integrity factor of trustworthiness is focused on the perception of whether or not the trainer "adheres to a set of principles" the trainee finds to be acceptable (Mayer et al., 1995; 719). Thus, even if the trainer's trustworthiness for the other two factors was influenced by his position as trainer or affiliation with the bank, this measure of trustworthiness is likely more focused on his values as an individual. In this vein, the findings conform to the idea that those who do

not see themselves as socially similar to the trainer perceived him as having less integrity when he had visible tattoos.

5.1.3 Hypothesis 3: Openness to Experience as a Moderator for Visible Tattoos and Perceived Trustworthiness

Hypothesis 3 proposed that openness to experience would moderate the relationship between visible tattoos and trustworthiness such that as openness to experience increased, the relationship between visible tattoos and trustworthiness would weaken. Hypothesis 3 was not supported.

Like Hypothesis 2, the interaction effects for the measures of ability was not statistically significant. It is expected that this is for reasons similar to those explained above; ability may have been influenced by the trainer's position and affiliation with the fictitious bank presented in the study.

The interaction term related to the second trustworthiness factor, benevolence, was not supported. While discussing the second hypothesis, it was noted that benevolence may be associated with trainer's role as a bank trainer as the more salient attribute (e.g. Brewer, 1988). Mayer and colleagues suggest that benevolence increases as a relationship persists, as more experience with the individual provides more information to accurately assess a person's benevolence (Mayer et al., 1995). Openness to experience is a personality trait that is characterized as being curious, intelligent, broadminded, imaginative, and daring (Barrick & Mount, 1991; McCrae & Costa, 1987). Given that openness to experience is associated with learning and actively acquiring information (Barrick & Mount, 1991), it is possible that the influence of openness trait on benevolence could manifest over time and continued exposure to the trainer.

For the third factor, integrity, the interaction effect was also not statistically significant. This finding is unexpected, as it was anticipated that the characteristics of openness to experience would lend to broadmindedness (McRae & Costa, 2004) in assessing the integrity of the trainer. For Hypothesis 3, the interaction effect was not empirically supported as anticipated.

5.1.4 Hypothesis 4: Authoritarianism as a Moderator for Visible Tattoos and Perceived Trustworthiness

Hypothesis 4 proposed that authoritarianism would moderate the relationship between visible tattoos and trustworthiness such that as authoritarianism increased, the relationship between visible tattoos and trustworthiness would strengthen. This hypothesis was not supported for any facet of trustworthiness.

The lack of support for the authoritarianism hypothesis may lie in the non-significant relationship between visible tattoos and trustworthiness. The lack of empirical evidence for any hypotheses related to authoritarianism is somewhat surprising, given its link to conventionalism and adherence to social norms. The expectation that authoritarians oppose ideas that go against social norms (Altemeyer, 1996) would strongly suggest authoritarianism should influence how tattoos are perceived and evaluated.

The lack of empirical support for this hypothesis is likely due, at least in part, to the lack of direct relationship between visible tattoos and trustworthiness. Exploratory analysis of the relationship between authoritarianism and trustworthiness when experimental condition is controlled for indicates that authoritarianism is related to trustworthiness in a statistically significant manner only when those who failed that tattoo

manipulation check are kept in the data set. When analysis is restricted (as previously discussed) to only those responses who accurately identified whether or not the trainer had tattoos, the relationship is not statistically significant.

Further exploration indicates that authoritarianism is correlated with correct and unsure responses to the tattoo manipulation. Appendix E presents a chart showing the frequency of correct, incorrect, and unsure responses based on levels of authoritarianism. While those lowest in authoritarianism seem more likely to correctly assess the presence of tattoos, no group stands out as particularly low performing as compared to the others. As such, the finding that the relationship between authoritarianism and trustworthiness disappears when only those who correctly responded to the manipulation check are assessed is interesting, but is not immediately attributable to a specific cause.

5.1.5 Hypothesis 5: Relationship between Perceived Trustworthiness and Learning

Hypotheses 1, 2, 3, and 4 addressed the attitudinal elements of the model, while hypothesis 5 addresses the training outcome of learning (Kirkpatrick, 1977). Hypothesis 5 proposed that when trustworthiness increased, learning would also increase. Empirical analysis of this hypothesis yielded non-significant results, and thus hypothesis 5 was not supported.

In developing hypothesis 5, it was posited that characteristics of the trainer would influence learning, with the assumption that characteristics related to his visible tattoos would be salient. As discussed with prior hypotheses, the effect based on visible tattoos was not present. Furthermore, based on interaction effects, it seemed that the ability and benevolence factors of trustworthiness were more likely influenced by his affiliation with

a bank rather than his physical appearance. If this is indeed the case, it is possible that trustworthiness is, to some extent, de facto in the training situation. Consequently, learning will not be influenced by trainer characteristics, but rather the other inputs of trainee characteristics, training design, and work environment (Baldwin & Ford, 1988). Furthermore, even if trustworthiness influences training, it may be that other factors are more important in influencing learning, such as the reaction to the training (c.f. Kirkpatrick, 1977).

Training effectiveness can be measured at different times following the training and can assess different aspects of the training (Kirkpatrick, 1977). In addition to the learning level of training effectiveness, the reaction level can also be assessed immediately following training (Mathieu et al. 1992). For this study and hypotheses, learning was the training outcome of interest. However, reaction level measures of cognitive and affective reaction were also collected in the study, and initial analyses of these scales suggest that trustworthiness was related to reaction level variables. While reaction to training is beyond the scope of this hypothesis and the proposed study, it would appear that trustworthiness does has an impact on training effectiveness, but not at the learning level.

5.1.6 Hypothesis 6: Learning Goal Orientation as a Moderator for Perceived Trustworthiness and Learning

Hypothesis 6 proposed that learning goal orientation would moderate the relationship between perceived trustworthiness and learning such that as learning goal orientation increased, the relationship between perceived trustworthiness and learning would strengthen. This hypothesis was not supported for any facet of trustworthiness.

While the findings from hypothesis 5 do not support the relationship between perceived trustworthiness and learning, it was anticipated that a relationship between learning goal orientation and learning would exist (e.g. Seijts et al., 2004). However, regression results for Hypothesis 6 also indicate that there is not a statistically significant relationship between learning goal orientation and the learning measure. As there is no readily apparent logical reason why these two should not be related, the measure of learning becomes suspect. In the analysis for this hypothesis, the number of tattoos a person had and knowing someone who had tattoos both had more of an influence on learning than individual personality characteristics.

As previously discussed, learning was measured by a gain score between the pre- and post-test (c.f. Cohen et al., 2003). This measure was used as it directly measured improvement after exposure to the training content and manipulation. As discussed in chapter 4, pilot study analysis found that gain scores did change after exposure to the training. This finding indicated that training content influenced post-test scores. However, test results alone may not be adequate to assess learning.

5.1.7 Post-Hoc Analysis

Dickson, Dukes, Smith, & Strapko (2014) found that women have more negative beliefs about the physical risks of tattoos, despite the fact they are tattooed at rates similar to men. What is noteworthy of their findings is that negative beliefs about risks also translated into greater stigmatization (Dickson et al., 2014), which may explain the gender interaction found in Hypothesis 1.

5.1.8 Summary of Findings

Of the six hypotheses tested in this dissertation, one received partial support. That support was found with moderation effects of social distance. While, overwhelmingly, visible tattoos do not seem to influence the perceived trustworthiness of the trainer, the interaction of social distance does influence perceptions of the ability and integrity of the trainer. The interaction of openness to experience also influences the perception of benevolence. These findings suggest that while visible tattoos do not influence perceived trustworthiness as expected, some individual characteristics do moderate the relationship.

5.2 Contribution of Study

This study makes a contribution to the literature by examining the influence of visible tattoos on a training outcome, as well as on perceived trustworthiness. The lack of statistically significant results regarding the direct effect of visible tattoos on perceived trustworthiness is counter to expectations. Prior research regarding tattoos in business suggest that there is a bias against those with tattoos (Bible, 2010; Brallier et al., 2011).

However, tattoos are beginning to lose their stigma (Kosut, 2006) and become part of the mainstream, particularly with younger entrants to the workforce (Dickson et al., 2014). Dickson and colleagues found that those who had tattooed family or friends reported less stigma against those with tattoos (2014). This research, combined with the findings in the present study, suggest that as the increase of tattooing in popular society may contribute to the decrease of sensitivity to tattooing in the workplace. A contribution of the present study, through its non-significant and partially significant findings is that visible tattoos do not influence some workplace outcomes such as

perceived trustworthiness or learning. However, some individual differences, may lead to some small variations.

From an academic standpoint, this study contributes to both the literature on body modification in business, as well as the literature on training effectiveness in the workplace. For body modification, this study falls in line with the most recent findings (e.g. Dickson et al, 2014), who find that stigmas are decreasing. For the literature on training and training effectiveness, this research supports the notion that trainee characteristics play an important role in training effectiveness. Furthermore, while some trainer characteristics are important (Ghosh et al., 2012), other characteristics (i.e. knowledge of content, ability to use teach aids, etc.) may play a more important role than physical appearance.

From a practitioner standpoint, the contribution of this study is that employees with visible tattoos may be as effective as those without tattoos. While the present study only considered the role of a trainer for an entry level position, the finding that there was no difference between the non-tattooed trainer and the tattooed conditions suggests that tattoos are not the most salient attribute in this context, and that may be extrapolated to other similar work contexts. Finding that visible tattoos do not interfere is juxtaposed to reported attitudes of managers and employees (c.f. Bible, 2010; Legal Alert for Supervisors, 2011). As such, the present study provides some evidence that tattoos may not always interfere with the performance of work duties, and thus may not be the most important attribute to consider when hiring an employee or assigning an existing employee to a task, such as training.

5.3 Limitations of the Study

This dissertation used a quasi-experimental design to create three treatment conditions of tattooing. As such, there are limitations to both the data collection and experimental design. Some limitations that exist include the sample used and the measures of both personality items and learning.

First, while care was taken to collect diverse responses, responses were not collected from actual employees or trainees in a business setting. Hypotheses were tested with a sample collected from both undergraduate students and non-student aged adults recruited form Amazon Mechanical Turk. Data was collected from both groups in an effort to increase the age range of the sample, given that age might play a role in how tattoos are perceived and evaluated (cf. Pew Research Center, 2010).

This concern was somewhat mitigated based on the finding that 29.7 percent of the AMT sample reported having at least one tattoo, while 25.4 percent of the student sample reported having at least one tattoo. An independent samples t-test (Hair et al., 2006) comparing the means of both groups indicates that there is not a statistically significant difference between the two groups based on number of tattoos they have ($t(162)= -0.59$, $p > 0.10$).

This similarity between the two groups may reflect the growing cultural acceptance of tattoos (Koch et al., 2004; Pew Research Center, 2010). A 2008 survey of college students (Lipscomb et al., 2008) reported 40.5% of students sampled had either a tattoo or non-earlobe piercing. The number of students in the present study had a rate of 33.3% reporting a tattoo and/or non-earlobe piercing. Prior to removing responses for failing to correctly identify whether or not the trainer had a tattoo, the student sample was

closer to the 2008 survey, with 37.6% of students in the current study reporting a tattoo and/or non-earlobe piercing.

An interesting difference between the two sample groups was the rate of body piercing, with 22.3% of the student sample reporting having at least one non-earlobe piercing, and 17.9% of the AMT sample reporting the same. An independent sample t-test (Hair et al., 2006) comparing the means of both groups indicates that there is no statistically significant difference between the two groups based on number of piercings they have ($t(162)= 0.69$, $p > 0.10$).

Thus, while similarities exist and the data suggests that the two groups are similar, a limitation remains regarding how seriously respondents approached the study task, given then they were not training for a job they would not actually be required to perform.

A second limitation of the study was item measures, particularly those that used reverse coded items. In assessing the constructs with existing, validated scales, reverse coded items were used. Principal components analysis and confirmatory factor analysis revealed that reverse coded items did not consistently load on the same factors as their corresponding non-reverse coded items.

One explanation for poorly performing reverse coded items is respondent acquiescence due to survey fatigue. If a respondent experiences fatigue, it is assumed that they are more likely to answer items quickly and with less thoughtfulness and consideration than they may have had at the beginning of the survey. Due to the length of the survey, fatigue is possible. However, manipulation checks and safeguards were used that suggest that responses kept in the data set did not follow distinguishable

patterns (e.g. all 4's) that would indicate acquiescence bias. Despite this, reverse coded items are known to lead to multi-factor loadings (Netemeyer et al., 2003) and reduced scale reliabilities (Swain, Weathers, & Niedrich, 2008). Future research regarding the content of this dissertation would likely be better served with less variables to not only address issues of model fit, but also to mitigate issues of respondent fatigue and acquiescence bias (e.g. Swain et al., 2008).

Lastly, a limitation of this study is the narrow scope by which to examine the influence of visible body modification on workplace outcomes associated with training. While the study attempted to focus on training in a professional entry level setting (i.e. bank teller), one limitation is that it is a simulated training. Furthermore, the study was limited to the tattoos of one trainer. Efforts were made to control the conditions so that the only difference was the tattoos. However, as discussed, the type and style of tattoo may influence how tattoos are perceived (Burgess & Clark, 2010). Thus, the tattoos of one person is likely not enough to provide a full assessment of how tattoos influence training outcomes or any other workplace process. Future research would benefit for more varied tattoo types (i.e. edgy versus cute), female trainers, or training content focused on an area other banking.

5.4 Recommendations for Future Research

As stated in the limitations above, future research could benefit from the inclusion of other tattoo types, female trainers, and a different training context. Additionally, other types of visible body modification such as piercing should be considered.

While body piercing was not included in the manipulation, it was included in the survey with the item "The trainer had piercings." Response options were *Yes*, *No*, or

Unsure/I don't know. For all conditions, the trainer did not have any piercings. For the control, 92% correctly identified that the trainer did not have a piercing. For the 1 tattoo condition, this number dropped to 51%, and in the full sleeves condition 25% correctly identified that he did not have a body piercing. Responses that were either incorrect or unsure increased in the progression from the control to the full sleeves condition.

Looking at the frequencies alone, an interesting pattern emerges that is outside the scope of this research but is noteworthy. The number of incorrect responses for the Sleeves condition is much higher than the other conditions, and over twice that which would be expected in a random distribution. It is conceivable that the number of false positives for the Sleeves condition is due to presence of the tattoos themselves. That is, respondents rely on their memory of the tattoo sleeves to inform their perception of whether or not the trainer had a piercing. This possibility would support the notion that there is a stereotype of visible body modification; presumably, an assumption that having tattoos suggests a person also has piercings. Accordingly, future research on the effects of body piercing would also further the literature.

Another area for future research is an improved or more robust measure of training effectiveness and learning (c.f. Kirkpatrick, 1977). The learning measure in this study was limited to comparing pre-test to post-test scores. While this gain score was able to assess changes after exposure to the training content, it is not the only way to measure learning. Furthermore, learning is not the only outcome that can be measured immediately upon completion of training. Reaction level variables can also be assessed, and are theorized to be related to transfer of training (Mathieu et al., 1992). Reaction

level variables, along with other measures of learning may allow for a better assessment of the training outcome.

5.5 Conclusion

This dissertation examined the impact of a trainer's visible body modification, specifically visible tattoos, on the perceived trustworthiness of the trainer and subsequent trainee learning. It was hypothesized that visible tattoos would influence perceived trustworthiness in a training scenario, that these perceptions would be moderated by trainee characteristics, and that perceptions of trustworthiness would then influence learning. Results of the study suggest partial support for the moderating influence of trainee characteristics, but other relationships were not supported. One potential interpretation of these findings is that visible tattoos may have a history of stigmatization, but the current data suggests that they do not have the negative impact in the workplace that much of the extant research assumes.

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APPENDIX A

TRAINING SCRIPT

As a teller at [NAME] Bank, you will be responsible for conducting routine transactions for bank customers. This includes cashing checks, accepting deposits and loan payments, and processing withdrawals. All of these require that you have an attention to detail to ensure that you follow bank protocol.

In this training segment, we will focus on introducing you to check cashing. After completing this training module, you should be knowledgeable about both the applicable laws and our bank policies for cashing checks. After watching this video, you should be able to accurately answer questions regarding how checks are cashed at [Name] Bank.

Let's talk about the basics. When a customer comes to you and wants to cash a check, how do you know if you can cash it?

The first thing you should establish is whether or not the customer has an account with our bank. [Name] Bank only cashes checks for customers who have existing accounts.

If you determine a customer does have an account with us, you can then verify whether or not the check they are presenting can be cashed.

One of our primary concerns is to determine if the check appears to be fraudulent. It is your duty to examine the check. Take note if the check appears to be altered in anyway. (*Hold up check)* Things to look for include the following: (*Close up shot of an example check. The shot should show the forearms and hands of the trainer, but appear to be focused on the check)*

- Look for perforations. Does it look like the check was torn out of a checkbook? (*Run finger along side and top of check to indicate where perforations should be)*
- Is the check number low? (*Point to check number)* For personal checks, look for numbers below 400. For business checks, look for numbers below 1500.
- Look at the font of the check. (*Point to top printing to draw attention to the font)* Does it appear to change? Is all the printing the same?
- Are the addresses for the bank and the account holder printed on the check? (*Point to addresses)*
- Is the routing number at the bottom of the check shiny? (*Point to routing number)* A real check will look dull.
- Are there are stains or discolorations on the check? (*Turn check over, looking at colors)*
- Does the signature appear to be authentic? (*Point to signature on the back of the check)*

(*Switch to wider angle of shot, back to trainer)* If a check appears to be suspicious, do not cash it. Contact your supervisor for further guidance.

If the check does not appear to be altered, you must then verify additional information before cashing the check.

First, verify the identity of the individual. [Name] Bank requires a legal photo ID if a customer receives cash for any reason. The name of the on the photo ID must match that on the check. If it does not, you may not cash the check. Even if you personally recognize the individual cashing the check, it is [Name] Bank policy that you verify identity using a photo ID. At this time, you should also verify that the check is endorsed on the back, and that this signature matches the individual presenting you the check.

Next, verify the date on the check. (*Close up shot of date on check, with trainers hands/arms, then back to wider shot to trainer)* A check that is older than 6 months is called a "stale check". While a bank can pay an old check as it sees fit, it is [Name] Bank policy that our tellers DO NOT cash stale checks. Under the United States Uniform Commercial Code, we are under no obligation to pay on checks older than 6 months.

A check with a date in the future is called a "post-dated check." It is also our bank policy that we do not cash these checks. All cashable check dates fall between the current date and 6 months prior. While federal law does permit the cashing of both stale and post-dated checks, it is our company policy that [Name] Bank tellers do not accept checks outside this six-month range.

Prior to issuing funds, you must next verify the amount the amount on the check and the amount the individual has available in their account. It is our bank policy that we do not cash checks in excess of the amount the customer has available in their account.

If there are not sufficient funds in the account to cover the amount of the check, we require our customers to deposit the full amount, which will be available to them based on an availability schedule. Our policy to not make funds immediately available is an effort to prevent bank losses due to fraud. The Expedited Funds Availability Act requires that check deposits are available based on a mandated schedule. Our schedule is as follows: (*Add text to screen with shortened information, over image of trainer*)

> Money is available the next business day for government checks, cashier's checks, and checks from an account from our [Name] Bank if that account has sufficient funds
>
> For checks drawn on local banks, funds must be available within two business days. A local bank is any bank located in the same Federal Reserve region as [Name] Bank. You can easily verify if the bank is local by looking at the second and third digits of the routing number on the check. (*Close up shot highlighting routing number)* Our region number is 65. (*Point to region number*) (*Return to wider angle to trainer)* All checks written from accounts from region 65 will have their funds available within two business days.
>
> For all non-local banks that are not from the same Federal Reserve region, there is a five business day hold on funds.

Lastly, we have an exception hold for customers whose accounts are less than 30 days old, or if the check is over $5000. For these situations, the hold for local checks is seven business days, and the hold for non-local checks is eleven business days.

Using this information, you begin to understand the basic rules and regulations involved in check cashing. As a recap, remember to *(on screen text as the trainer says it)*

1) Verify the customer has an account with [Name] Bank
2) Inspect the check to look for indications that it may be fraudulent
3) Verify the identification of the individual against the name on the check
4) Verify the signature on the check
5) Verify the date on the check is within the accepted date range
6) Verify there are sufficient funds to cash the check, and if there are not,
7) Determine how long a deposit will be held based on the availability schedule

This concludes the Check Cashing training module.

APPENDIX B

TRAINING QUESTIONS

Please answer the following questions to the best of your ability, based on what you learned watching the training video.

1) Before cashing a check, the first thing you should verify is:
    a. The routing number on the check
    b. The date on the check
    c. If the check is fraudulent
    d. If the customer has an account with [Name] Bank

2) What is a stale check?
    a. A check older than 30 days
    b. A check older than 6 months
    c. A check older than one year
    d. Any check that has not been cashed

3) All of the following should be examined to see if a check is fraudulent, *except*:
    a. The font of the check
    b. The paper of the check if there are stains or discoloration
    c. The routing number
    d. How old the check is

4) A check with a low number may be fraudulent. Low numbers are
    a. Personal checks below 400, Business checks below 1500
    b. Personal checks below 1000, Business checks below 3000
    c. Personal checks below 1500, Business checks below 4000
    d. Personal and business checks below 1000.

5) What should you do if a check appears to be suspicious?
    a. Call the police
    b. Tell the customer you cannot cash it, and shred the check immediately
    c. Tell the customer you cannot cash it, and advise they go to another bank
    d. Contact your supervisor

6) To **receive cash**, a customer must provide
    a. A bank card with account number
    b. A legal photo ID
    c. Two forms of identification
    d. Contact information for the party that issued the check

7) Requiring a photo ID
    a. Is bank policy
    b. Is required by law
    c. Is optional
    d. Is not necessary if you know the customer personally

8) A check with a date in the future is called
    a. Stale Check
    b. Valid Check
    c. Pre-Check
    d. Post-dated Check

9) Bank policy on post-dated checks is
    a. [Name] Bank deposits these checks until the date on them is correct
    b. [Name] Bank cashes these checks as long as they are not more than 6 months post dated
    c. [Name] Bank does not cash post-dated checks
    d. Federal law does not allow for cashing post-dated checks, so bank policy follows the law

10) Cashable checks fall between
    a. 6 months prior to and after the current date
    b. The current date and 6 months prior
    c. 12 months prior to and after the current date
    d. The current date and 12 months prior

11) Checks larger than the customer's available balance in their account
    a. Can be cashed immediately
    b. Must be deposited
    c. Cannot be cashed or deposited

12) The Expedited Funds Availability Act requires
    a. that banks cash checks immediately
    b. that customers always have access to funds in their account
    c. that funds must be available within one month of depositing a check
    d. that check deposits are available based on a specified schedule

13) Checks drawn on local banks will have funds available within
    a. 1 business day
    b. 2 business days
    c. 5 business days
    d. 8 business days

14) A local bank can be identified by its Federal Reserve region, which is
    a. located on the top right of the check
    b. is the first and second digits of the routing number
    c. is the second and third digits of the routing number
    d. looked up in a Federal Reserve region book

15) For customers who have accounts less than 30 days, or a check over $5000, a check can be held on local checks for _____ days. This is called a _____ hold.
    a. 3; exception
    b. 5; temporary
    c. 7; exception
    d. 11; temporary

APPENDIX C

MEASUREMENT SCALES

Table C.1 Reaction Scale

Based on your impressions of the training, please indicate your agreement with the following statements.

Affective Reaction

1. I found this training program to be enjoyable.
2. I was satisfied with the overall quality of the training.
3. The training was informative and interesting.
4. I am glad I participated in training.

*Cognitive Reaction**

1. The training has helped me understand what is expected of a teller in day-to-day check cashing activities.
2. The training was of little practical value to a new bank teller. ♯
3. Participating in this training would help a trainer perform his or her job better.
4. The training will be useful for employees when they are on the job.

Affective Reaction

5. I found this training program to be enjoyable.
6. I was satisfied with the overall quality of the training.
7. The training was informative and interesting.
8. I am glad I participated in training.

♯ denotes reverse coded items.

* Items were adapted to reflect content of training

Table C.2 Trustworthiness Scale

Based on your impressions of the trainer in this study, please indicate your agreement with the following statements.

Ability

1. The trainer seems very capable of performing his/her job.
2. The trainer is probably successful at the things s/he tries to do.
3. The trainer seems to have a lot of knowledge about the work to be done.
4. I feel very confident about the trainer's skills.
5. The trainer has specific capabilities that can increase worker performance.
6. The trainer is well qualified.

Imagine you were to work with the trainer. Please indicate your agreement with the following statements.

Benevolence

1. The trainer would be very concerned about my welfare.
2. My needs and desires would be very important to the trainer.
3. The trainer would not knowingly do anything to hurt me.
4. The trainer would really look out for what is important to me.
5. The trainer would go out of his/her way to help me.

Integrity

1. The trainer has a strong sense of justice.
2. The trainer will stick to his/her word.
3. The trainer tries hard to be fair in dealing with others.
4. The trainer's actions and behaviors would not be very consistent.
5. I like the trainer's values.
6. Sound principles seem to guide the trainer's behaviors.

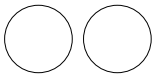
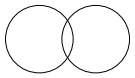
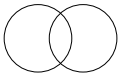
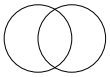
Table C.3 Social Distance Scale

1. Would you accept someone like the trainer as your neighbor?
2. Would you accept someone like the trainer as a colleague at work?
3. Would you accept someone like the trainer as a friend?
4. Would you acquaint someone like the trainer with a friend of yours?
5. Would you recommend someone like the trainer for a job working for a friend of yours?
6. Would you let someone like the trainer take care of your children for a couple of hours?
7. Would you share an apartment with someone like the trainer?
8. Would you accept someone like the trainer marrying a member of your immediate family.*
9. Would you introduce someone, male or female, like the trainer to a friend as your relationship partner?**

* Original scale had wording "one of your children". As most respondents in this study were undergraduate students, the wording was changed as many students are not expected to have children near marriageable age.
** The wording "male or female" was added to alleviate responses based on the gender of the trainer.

Table C.4 Social Identification Scale

We sometimes strongly identify with a social group. This occurs when we perceive a large amount of overlap between our ideas about who we are as a person and what we stand for (that is, our self-image) and our ideas about who someone else is and what they stand for (that is, the trainer's image). Imagine that the circle at the left in each row represents your own personal identity and that the other circle, at the right, represents the trainer's identity. Please indicate which case (A, B, C, D, E, F, G or H) best describes the level of overlap between your identity and the trainer's identity.*

	Me **Trainer**	
A		Far Apart
B		Close Together but Separate
C		Very Small Overlap
D		Small Overlap
E		Moderate Overlap
F		Large Overlap
G		Very Large Overlap
H		Complete Overlap

*Adapted from Bartels & Hoogendam, 2011 (from Bergami & Bagozzi, 2000)

Table C.5 Authoritarianism Scale

1. Our country needs a powerful leader, in order to destroy the radical and immoral currents prevailing in society today.
2. Our country needs free thinkers, who will have the courage to stand up against traditional ways, even if this upsets many people. ♯
3. The ‘‘old-fashioned ways’’ and ‘‘old-fashioned values’’ still show the best way to live.
4. Our society would be better off if we showed tolerance and understanding for untraditional values and opinions. ♯
5. God’s laws about abortion, pornography and marriage must be strictly followed before it is too late, violations must be punished.
6. The society needs to show openness towards people thinking differently, rather than a strong leader, the world is not particularly evil or dangerous. ♯
7. It would be best if newspapers were censored so that people would not be able to get hold of destructive and disgusting material.
8. Many good people challenge the state, criticize the church and ignore ‘‘the normal way of living’’. ♯
9. Our forefathers ought to be honored more for the way they have built our society, at the same time we ought to put an end to those forces destroying it.
10. People ought to put less attention to the Bible and religion, instead they ought to develop their own moral standards. ♯
11. There are many radical, immoral people trying to ruin things; the society ought to stop them.
12. It is better to accept bad literature than to censor it. ♯
13. Facts show that we have to be harder against crime and sexual immorality, in order to uphold law and order.
14. The situation in the society of today would be improved if troublemakers were treated with reason and humanity. ♯
15. If the society so wants, it is the duty of every true citizen to help eliminate the evil that poisons our country from within.

♯ denotes reverse coded items.

Table C.6 Openness to Experience Scale

1. I see myself as someone who comes up with new ideas.
2. I see myself as someone who is curious about many different things.
3. I see myself as someone who is a deep thinker.
4. I see myself as someone who has an active imagination.
5. I see myself as someone who is inventive.
6. I see myself as someone who values artistic, aesthetic experiences.
7. I see myself as someone who prefers work that is routine. #
8. I see myself as someone who likes to reflect, play with ideas.
9. I see myself as someone who has few artistic interests. #
10. I see myself as someone who is sophisticated in art, music, or literature.

# denotes reverse coded items.

Table C.7 Goal Orientation Scale

Learning Goal Orientation

1. I am willing to select a challenging work assignment that I can learn a lot from.
2. I often look for opportunities to develop new skills and knowledge.
3. I enjoy challenging and difficult tasks at work where I'll learn new skills.
4. For me, development of my work ability is important enough to take risks.
5. I prefer to work in situations that require a high level of ability and talent.

Prove (Performance Goal) Orientation

1. I'm concerned with showing that I can perform better than my coworkers.
2. I try to figure out what it takes to prove my ability to others at work.
3. I enjoy it when others at work are aware of how well I am doing.
4. I prefer to work on projects where I can prove my ability to others.

Avoid (Performance Goal) Orientation

1. I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others.
2. Avoiding a show of low ability is more important to me than learning a new skill.
3. I'm concerned about taking on a task at work if my performance would reveal that I had low ability.
4. I prefer to avoid situations at work where I might perform poorly.

Table C.8 Conscientiousness Scale

1. I see myself as someone who does a thorough job.
2. I see myself as someone who can be somewhat careless. #
3. I see myself as someone who is a reliable worker.
4. I see myself as someone who tends to be disorganized. #
5. I see myself as someone who tends to be lazy. #
6. I see myself as someone who perseveres until the task is finished.
7. I see myself as someone who does things efficiently.
8. I see myself as someone who makes plans and follows through with them.
9. I see myself as someone who is easily distracted. #

# denotes reverse coded item.

Table C.9 Attention Check Items

1. Did the trainer seem professional?
2. Did the trainer seem unprofessional?
3. Did the trainer appear to be wearing clothing appropriate for the training?
4. Did you notice any tattoos or piercings on the trainer?
5. If so, where? How many?
6. Do you recognize the trainer as someone you know or have seen before?

APPENDIX D

TRAINER APPEARANCE

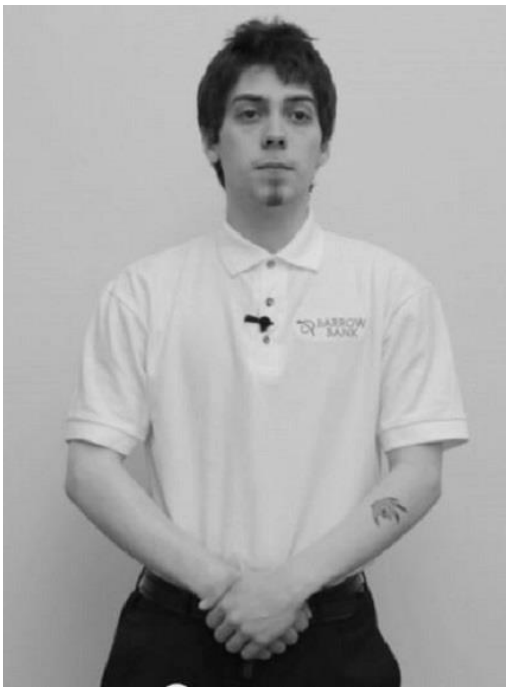


Figure D.1 One Tatto

Figure D.2 Full Sleeves

APPENDIX E

TATTOO ATTENTION CHECK BASED ON AUTHORITARIANISM

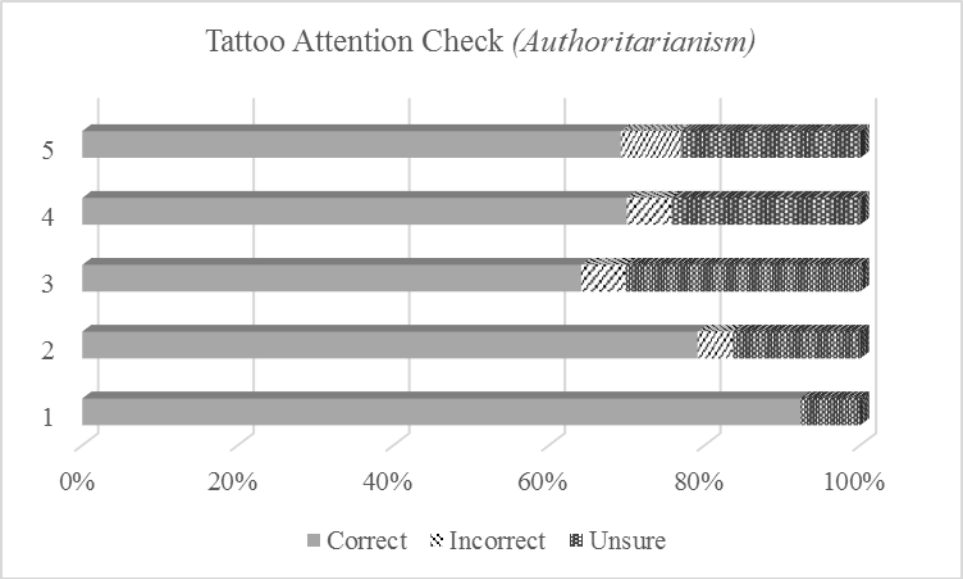


Figure E.1 Tattoo Attention Check