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Managing Implicit Bias with Transformational Conversation: A Qualitative Field Study of Social Identity Theory

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Managing Implicit Bias with Transformational Conversation: A Qualitative Field Study

of Social Identity Theory

by

Kimberly Ann Stephens

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

Executive Doctorate in Business

In the Robinson College of Business

Of

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ACCEPTANCE

This dissertation was prepared under the direction of the KIMBERLY ANN STEPHENS Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

Richard Phillips, Dean

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Identity Theory

by

Kimberly Ann Stephens

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IT companies are spending millions of dollars a year on diversity training to try to increase their population of underrepresented minorities and women. Much of the current training centers on historical prejudice, shaming, and divisive diversity rhetoric. The research has shown this is not effective. In addition, a large part of the present training is focused solely on creating awareness of implicit bias, which I found in my research is not enough to evoke change. My findings show that a longer, interactive workshop following a process model was successful. By breaking down the elements of the process model into unfreeze, change, and refreeze, I was able to determine the role and impact of each element on change and to identify transformational conversation as a successful tool for shifting the perspectives of the participants and weakening implicit bias. Consistent with Contact Theory, it was through transformational conversation that participants suspended their own social identity and perspective and considered that of another participant, which fostered change. The final part of the model, refreeze, focused on participants making plans to sustain the learning. Through these findings, I have created a successful process model for change in implicit bias and introduced a new tool, transformational conversation. In

addition, I have forwarded our thinking on how to employ shifts in implicit bias within a group of people with heterogeneous social identities.

INDEX WORDS: Implicit Bias, implicit association, unconscious bias, social identity theory, transformational conversation, implicit bias theory

I   INTRODUCTION

Twenty percent of large companies in the United States were providing implicit or unconscious bias training to their employees in 2016. That number is expected to reach 50% in the next five years (Raza, 2016, p. 18). Implicit biases are the assumptions or beliefs that affect our decisions, actions, and understanding, but they are inaccessible to our conscious self and enacted involuntarily. Companies are spending millions on diversity efforts to combat these biases in the hope of creating a more equitable and diverse workplace. Yet despite the amount of time and money, there is little evidence that the current methods are working.

I.1   Lack of Theory or Measurement

In the study, *Reviewing Diversity Training: Where We Have Been and Where We Should Go*, the authors reviewed 178 articles that dealt with diversity training – both in the workplace and on campuses (Bezrukova, Jehn & Spell, 2012). Based on their research, the authors emphasized the need for a more theory-based and longitudinal approach with measured outcomes. They call for both implicit measures to assess a participant's behaviors, along with explicit measures, such as self-report (Bezrukova et al., 2012, p. 211). This is important because if the desire for diversity training is behavioral change, we must look to validated research both in psychology and in education. More than half of the articles reviewed by the authors did not follow any theoretical tradition. In other words, the content, design, and facilitation of the training were not based on any proven method (Bezrukova et al., 2012, p. 212).

Joy-Gaba makes the point that "only 36% of the organizations that provide diversity training report taking measures to assess whether the training was effective (SHRM, 2010)" (Joy-Gaba, 2011, p. 5). She goes on to say that, "For the small amount of research on effectiveness using actual behavioral outcomes such as changes in the diversity of the workplace,

the evidence suggests that most existing diversity training practices are inert, with some even having counterproductive effects (Kalev, Dobbin, & Kelly, 2006; Naff & Kellough, 2003). Some evidence suggests that diversity training can *increase* individuals' biases toward minority group members (Kidder, Lankau, Chrobot-Mason, Mollica, & Friedman, 2004; Sidanius & Pratto, 1999). The root of the problem may be that diversity training is often a trainer's 'best guesses' about practices that could reduce discrimination, rather than being grounded in research evidence of what changes discriminatory behavior (Kalev et al., 2006)" (Joy-Gaba, 2011, p. 5). Companies are spending millions on training that may not give them the desired outcome, and they do not even know it.

I.2   Training Not Effective

In mid-2014, Google was the first to release its diversity numbers to the public (from January 2014), and they showed a heavy concentration of white males in the company – 73% male and 30% female; 61% white; 30% Asian; four percent one or more races; three percent Hispanic; two percent Black; and less than one percent other (Getting to work on diversity at Google, 2014). From Google's web site, the company promotes its approach to implicit bias training:

> Research shows that simply raising awareness about unconscious bias can lead to more conscious decision making. We started an internal conversation in 2013 about unconscious bias, and we continue to invest in unbiasing trainings. Over 74% of Googlers have participated in these workshops, and all new Googlers and managers are trained in it. Additionally, we've shared our unbiasing materials and research on our platform re: Work with Google; now anyone from any industry can create unbiasing trainings for their team. (Diversity, n.d.)

Notwithstanding Google's efforts, the numbers have not moved significantly in three years for females, Hispanics and Black: 69% male and 31% female; 56% white; 35% Asian; four percent one or more races; four percent Hispanic; two percent Black; and less than one percent other (Google Diversity, n.d.). In addition, Google was engaged in some very public disputes in 2017 and 2018 over its diversity policies and culture (Tiku, 2018).

In January of 2015, Intel pledged $300 million to workplace diversity. Their employee numbers from their 2013 diversity filings show 76% of their employees are male, 24% are female, eight percent are Hispanic, and four percent are African-American/Black (Alter, 2015). The company's diversity report from 2016 shows that the number of under-represented minorities has remained flat over the past three years, with Hispanic representation decreasing slightly, African-American representation up by .3 percent from 2014 to 2016 and Native American representation up by only .1 percent. Overall for women, representation has increased by 1.9 percent (Intel Diversity & Inclusion Mid-Year Report, 2016; O'Brien, 2017).

For Microsoft, the online version of its unconscious bias training became mandatory for all employees in 2015, but the company did not experience much change in the demographics of the employee population in 2016: 73.7% male, with women declining by one percent from 2015 at 26.8% to 25.8%. Caucasians represent 58% of the population, and Asians are at 30.5%. African American/Black representation increased by 0.2 percentage points (to 3.7 percent), and the total Hispanic/Latino representation increased by 0.1 percentage point (to 5.5 percent) (Houston, 2016).

All the companies mentioned have focused, full-time diversity officers and a diversity strategy in place, with unconscious bias training as a component. Yet, the focus of these efforts – to increase women and under-represented minorities in tech – has not be fulfilled. As we can see

from the diversity numbers for the last three years for both Google and Intel, and Microsoft in the last two years, their efforts are not effective. No doubt there are other diversity initiatives going on behind the scenes, but by assuming they can eliminate implicit bias in a short, one-time workshop, these companies are trivializing the deep-set assumptions and biases built over a lifetime. Furthermore, these workshops are missing what I believe is a key component to change – the interaction and contact through transformational conversation needed to move people in the process from awareness to change, as I will illustrate more fully later in the dissertation.

I.3   My Research Focus

Building on the idea that the currently available training for implicit bias is not backed by research, I have created a theory-based workshop focused on proven techniques of change. My contribution was to bring in the element of employing contact through transformational conversation as a method of change. I define transformational conversation as a conversation between two or more people who differ in some aspect of social identity. In the workshop, I focused on a very specific topic for transformational conversation – having the participants share stories of a time when implicit bias was a factor in their lives. It was my belief, based on the research and my experience, that this interaction would be a facilitator of behavioral change. With my research, I sought to answer the question: To what extent can a conversational strategy engage peoples' social identity to weaken their implicit bias and support behavioral change? Going into the research, I considered three possibilities: 1) Doesn't work at all for anyone; 2) Works differently for x and y; or 3) Works all the time for everyone.

Because our perspectives are built on a lifetime of individual experiences, we need to examine those experiences and address them individually, not as a collective of generalizations or a one-size-fits-all workshop. It is my position that an individual's social identity will influence

behavioral change – specifically a person's motivation. Any training should consider a person's social identity because this identity has been built on years of assumptions, hardwired connections and reinforced ideas about people – in other words, the building blocks of implicit bias. Each person has a different social identity made up of different implicit biases, but some are shared with others considered part of his/her ingroup. As an ingroup member, it is difficult to see or understand the outgroup's perspective and vice versa. However, the ability to see another's perspective is at the heart of unlocking the behaviors that are hidden in our implicit biases. Moreover, to understand another's perspective or mental state, you have to employ cognitive empathy (Baron-Cohen, 2009). Accordingly, through my workshop, I sought to trigger cognitive empathy toward the opposite gender through sharing of experiences through transformational conversation, as part of Contact Theory.

To create a workshop built on theory and research, I examined the available studies to see what has worked and not worked when it comes to weakening implicit bias and thought about how to apply this research in a workshop setting to help managers overcome their implicit biases to make effective decisions in hiring, developing, promoting and retaining under-represented minorities and women. Based on an extensive meta-analysis by Forscher, Lai, Axt, Ebersole, Hermine, Devine, and Nosek (2017), the current techniques being used are not impacting participants' implicit bias, explicit bias or behavior change. Instead, I built upon one of the three processes the authors identified as mildly effective.

I also added a fourth element – transformational conversation. The centerpiece of the study – the implicit bias workshop – focused on directly targeting associations through transformational conversation as part of Contact Theory. Allport said, "Only the type of contact that leads people to do things together is likely to result in changed attitudes" (1954, p. 276).

Although Contact Theory was originally developed for race, recent research has shown it is appropriate to generalize to broader ingroup/outgroup associations (Pettigrew & Tropp, 2006). My argument for adding conversation is that we need to address an individual's identity and consequently, his/her implicit biases, head on through conversation. Through interaction with someone with a different perspective, the individual becomes more aware of his/her implicit bias and has a genuine desire to change his/her behavior to prevent acting on the implicit bias. As a result, implicit bias is weakened and creates an opening for behavioral change.

I.4   Theoretical Framing

The theory goals for the study included the following: understanding how a person's social identity influences his/her implicit biases; determining if behavioral change techniques designed to shift implicit biases work differently, the same or not at all based on a person's social identity; and determining if adding "transformational conversation," as part of Contact Theory, to an implicit bias workshop will evoke the desired behavioral change.

I.4.1   *Conceptual model*

A conceptual model simplified my approach and helped "uncover, confirm, or qualify the basic processes or constructs that undergird" my study (Miles & Huberman, 2014, 31). My conceptual model is based on Contact Theory, Social Identity Theory and Implicit Bias Theory. The construct is that based on your social identity (ingroup or outgroup) you are motivated differently to engage in conversation with someone who has a different perspective or social identity. The ingroup is less motivated to change because they have less to gain; while the outgroup is more motivated because they have more to gain. Once motivated, both groups can engage in conversation. As a result of this conversation, the partipants begin to see a different

perspective, thus weakening their implicit biases and setting up an opportunity for behavioral change.

Figure 1:Conceptual Model of Change for Implicit Bias
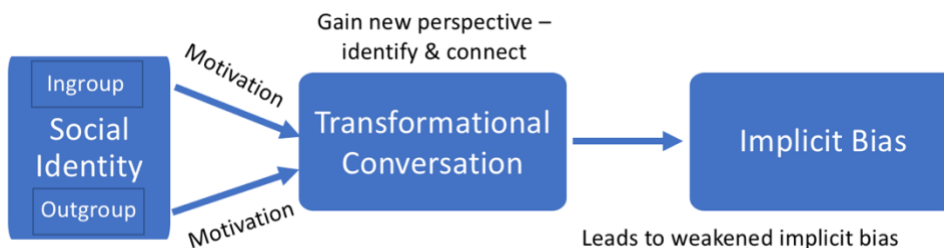
This conceptual framework evolved as the study played out and the "bigger picture" became clearer, as described by Miles & Huberman (2014, p. 23). As a qualitative researcher, I revised my model to make it "more precise, replace empirically weak bins with more meaningful ones, and reconfigure relationships" (Miles & Huberman, 2014, p. 24). Based on my research, I would now qualify the ingroup and outgroup part of the model by saying everyone at some point is part of the ingroup or outgroup, depending on the context.

I.4.2 *Process model*

Based on the extensive research on Contact Theory reducing prejudice, I believe the solution lies within this theory – specifically focusing on transformational conversation as a tool. The process model allowed me to better trace how the behavioral change technique of transformational conversation will impact the implicit biases of the individual. Because I was trying to answer a how question and the process is dependent on temporal events, the process model is the right one to use (Van de Ven, 2007). I used the Lewin Model of Change, which has three stages: Unfreeze, Change and Refreeze. The idea behind Lewin's model, as applied in my research, is to unfreeze the undesired behavior, change the undesired behavior to a desired

behavior, and then refreeze the desired behavior. See Figure 2. I elaborate further on this model in the research design section.

Figure 2: Process Model of Change for Implicit Bias

I.4.3   *Tools for change*

In both the conceptual model and the process model, I referenced the tools I introduced to the participants to help them work through their own implicit biases and those around them: the Ladder of Inference and the Bias Feedback Loop. I will provide more information on both below.

I.4.3.1   *Ladder of Inference.*

The Ladder of Inference is a mental model introduced by Chris Argyris in 1970 and referenced in Peter Senge's *The Fifth Discipline Fieldbook (1994)*. The ladder is the figurative path our mind takes as it moves from the data selected at the bottom of the ladder all the way up to the beliefs we adopt based on this data, which is many times erroneous. Starting from the data we select in everyday situations, we begin to make meaning. From there, we make assumptions and begin to draw conclusions. Based on those conclusions, we adapt our beliefs and take action. This is a reflective loop, so our beliefs then determine what data we select the next time (Senge, 1994, p. 243). I gave an example in my workshop of my own experience moving up the ladder too quickly:

I was pitching an idea over the phone to my manager for a diversity program. I was very excited about the possibilities. As I am talking with her, I hear her typing. I select the

data – she is typing. I add meaning to what I hear – she is distracted and typing. I make an assumption – she is not listening to me. I draw a conclusion – she does not think this is a good idea. I adapt my beliefs – she is never really supportive of me. I take action – I am going to look for a new job. I moved up the ladder in a matter of seconds, and I have gone from being excited to looking for a new job. I offered this example as a way to show participants how they could be making errors in their thinking anywhere along the ladder. I selected data that was true – my manager was typing. But where I went astray was the meaning I assigned to it – she was not listening. In fact, the correct meaning was that she was typing notes, so she could better pitch this idea to the vice president so that we could implement the program.

Through the workshop, I elaborated on Senge's three ways to use the Ladder of Inference (1994, p. 245):

1. Becoming more aware of your own thinking and reasoning (reflection);

2. Making your thinking and reasoning more visible to others (advocacy); and

3. Inquiring into others' thinking and reasoning (inquiry).

The ladder helped participants mitigate their own biases and to question the biases of others.

I.4.3.2   Bias Feedback Loop.

Another tool I brought into the workshop is a mental model – Bias Feedback Loop, based on Devine's research on "breaking" prejudice (1989; Devine, Forscher, Austin, & Cox, 2012). The basic premise behind the tool is that we need feedback that contradicts our assumptions to break the cycle of reinforcing biases.

Figure 3: Bias Feedback Loop
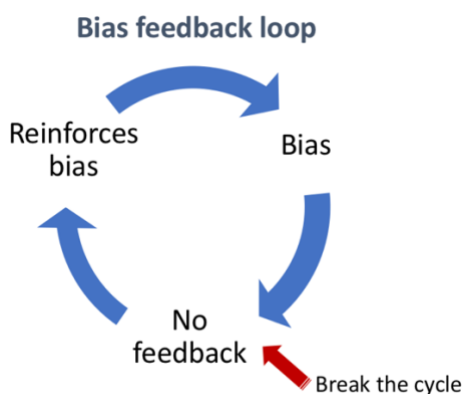
The cycle is based on the assumption that you hold because of previous experiences or interactions. When you encounter a situation or person that triggers that assumption, you have a choice: 1) continue with the assumption and do not seek feedback, or 2) seek feedback to validate or contradict that assumption. If you choose not to seek feedback, you are reinforcing your bias and giving more weight to the assumption. Each time you cycle through the loop, you are reinforcing the bias, stereotype or prejudice, depending on the content of the assumption.

I asked the participants to use the feedback loop to seek out more information when they find themselves making assumptions. This is a good tool for participants to have at their disposal because it allows them to apply the principals of breaking assumptions or prejudice to multiple situations.

I.5   Why and to Whom the Research Is Important

This study is significant because corporations in North America are looking for ways to effectively address their employees' implicit bias and create a more diverse workplace. They are spending millions on diversity training (example: Google spent $150M in 2015), primarily through the cottage industry that has crept up in the last few years – an industry unregulated, not necessarily based on academic research and largely unmeasured for effectiveness. In addition, since mid-2014, large IT companies are being pressured by special-interest groups and the media

to release their diversity numbers – their employee population broken down by race and gender. For those companies that have complied, the numbers reflect that white males are the overwhelming majority. The backlash in the media has been substantial, so these companies feel compelled to take measures to create more diverse and inclusive workplaces.

The current thinking is that addressing implicit bias through training will lead to more diversity in the employee base and less-biased decision making. Research has shown that implicit bias impacts business decisions, resulting in fewer diverse hires, promotions, etc., so there is a known impact. "Data on implicit or unconscious bias are surprising and even troubling because individuals and even professionals, whose conscious values reveal no intent to harm, nevertheless show systematic and selective patterns of decision-making that result in differential treatment" (Banaji, Bhaskar & Brownstein, 2015, p. 184). A report in 2012 from the Center for American Progress found that two million employees leave their jobs annually because of workplace discrimination – costing businesses an estimated $64 billion (Burns, 2012). Unfortunately, no company seems to have cracked the code on how to help mitigate their employees' implicit biases.

Also, there is also positive pressure for companies to increase their diversity. A research study from Deloitte found that among the 128 different talent practices they studied, the highest performing companies were "focused on building an Inclusive Talent System" (Bersin, 2015). A study from McKinsey found "that companies in the top quartile for gender or racial and ethnic diversity are more likely to have financial returns above their national industry medians. Companies in the bottom quartile in these dimensions are statistically less likely to achieve above-average returns" (Hunt, Layton, & Prince, 2015). Companies with a diverse leadership team are 70% more likely to capture new markets, according to a Harvard Business Review study (Raza, 2016, p. 17). So,

companies looking for financial success would do well to pay attention to diversity and inclusion as part of their business strategy.

My research is of interest to both academics and practitioners. Practitioners will be interested in learning how identity plays a role in the training they are conducting with their employees and figuring out to make this training more effective. They will also look beyond traditional behavioral change techniques used in training to focus on methods shown to work with implicit bias, according to current research. Academics will be interested in the introduction of transformational conversation as a behavioral change technique and the role of identity in its use and application to implicit bias. In addition, I will contribute to academia and practitioners by forwarding the thinking on how we employ shifts in implicit bias within a group of people with heterogeneous social identities. As a result, implicit bias training will be designed to address participants' social identity – not a one size fits all.

II   LITERATURE REVIEW

My literature review focused on three areas: Implicit Bias Theory, Social Identity Theory and Contact Theory. I chose Implicit Bias Theory because of its obvious link to the research question, so I looked at seminal works by Kahneman (2011); Banaji and Greenwald (2013); Ross (2014); and Forscher et al. (2017). Because much of the current training was focused on gender or racial bias, I wanted to take a deeper dive into the literature on social identity to see if this focus was effective. I reviewed seminal works by Tajfel and Turner (1986); and Reynolds, Subašić & Tindall (2015). I knew from past experience conducting unconscious bias workshops that conversation played an important role in change, but I was not aware of the research behind it. The research on Contact Theory from Allport (1954), Wilson (2011), and Pettigrew and Tropp (2006, 2013) explained a lot of the success I had with conversation and left room for me to make

a contribution by narrowing the focus to transformational conversation as a behavioral change tool for implicit bias.

II.1 Implicit Bias Theory

I have done a thorough review of the pivotal works on Implicit Bias Theory and have also reviewed current studies for the latest thinking. In this section, I will offer an overview of what implicit bias is, how it works as defined by some of the leaders in the field and why it matters. I will also tie it to work done by Devine et al. (2012) on prejudice and explain why I believe research done on reducing prejudice is applicable to reducing implicit bias. I will then pull in a meta-analysis from Forscher et al. (2017) to drill down to what has worked and not worked in changing a person's implicit biases. For my purposes, I will use implicit bias and unconscious bias interchangeably. From my research, implicit bias and implicit attitudes are the dominant terms used in academia, while unconscious bias is used more by practitioners.

II.1.1 *What is implicit bias?*

To understand more about the centerpiece of my research, I will give an overview of implicit bias as presented in the literature. Banaji and Greenwald define implicit bias this way: "What are hidden biases…bits of knowledge stored in our brains because we encounter them so frequently in our cultural environments. Hidden biases can influence our behavior toward members of particular social groups, but we remain oblivious to their influence" (2013). Ross in *Everyday Bias* says that "unconscious bias comes from social stereotypes, attitudes, opinions, and stigma we form about certain groups of people outside of our own conscious awareness" (2014, Chapter 1). Implicit biases are strongly-held beliefs or assumptions.

Implicit Bias Theory says that we have a lifetime of experiences that influence how we react to situations, people, places, etc. Through your interactions with others, you have created a

mindmap of assumptions about race, gender, socio-economic status, etc. Each time you encounter a person you are pulling out this mindmap to see what associations you have already constructed based on characteristics the person presents to you. You are trying to make a connection between the person and "a person like them" that you have encountered before. You are attempting to categorize and put the person in a social group that you understand. This isn't necessarily a bad thing. Implicit bias most likely developed as an evolutionary safety feature, so that we could quickly determine whether a person was a friend or foe: "Is this person dangerous? What can my past teach me about what I can expect from this person?"

This categorization allows us to quickly navigate the complex world around us, by placing people in groups, so we can compare them to previous people we have encountered. Ross says that "gender, race, sexual orientation, age, and so on, are all such categories." He goes on to say that "It is not a big jump, then, for the mind to associate qualities and values to those categories, for example: good or bad; right or wrong; smart or stupid; safe or unsafe." (Ross, 2014, Chapter 1). Much of this is implicit – we are not consciously aware of the decisions we are making based on our own biases. Scientists say that anywhere from 60 to 90% of our decisions are made unconsciously.

II.1.2 *How implicit bias works.*

At any one time, we are exposed to eleven million bits of data, but we can absorb only about forty, and consciously we notice as few as seven (Ross, 2014, Chapter 2). Ross offers this explanation of how the brain works:

> As the amygdala picks up these signals, they get sent into a complex set of structures in the brain, which are generally referred to as the limbic system. The limbic system is

responsible for a tremendous amount of our rapid, responsive and automatic functioning. The hippocampus…processes the information, searches the "database" of memories to identify the catalyzing person, object, or circumstance and figure out what it is (e.g., gray hair/ older). This happens so rapidly that it appears to be instantaneous. It keeps us walking, talking, and breathing, along with hundreds of other "automatic" responses that would almost paralyze us if we had to think about them every time we encountered a new environmental stimuli.

The system determines the significance of the occurrence and generates whatever emotions and motivational states it requires to respond. The hypothalamus then serves as a traffic control system, which sends signals through the cingulate gyrus and then the anterior cingulate cortex and tells the body how to respond. (Ross, 2014, Chapter 2)

Kahneman calls this functioning System 1 Thinking – fast, automatic and the heavy lifter in our brain (2011, pp. 29-30). "System 1 operates automatically and quickly, with little or no effort and no sense of voluntary control" (Kahneman, 2011, p. 20).

"The prefrontal neocortex is where our higher functioning thoughts tend to manifest. For example, our deeper reasoning capacity, our ability to formulate and use language, our sensory perceptions, and our more conscious thinking take place in the prefrontal neocortex. Kahneman referred to the activity that takes place here as System 2 Thinking, or the slow brain." (Ross, 2014, Chapter 2). "System 2 allocates attention to the effortful mental activities that demand it, including complex computations. The operations of System 2 are often associated with the subjective experience of agency, choice, and concentration" (Kahneman, 2011, p. 21).

Ross says, "When we are afraid, our amygdala takes over. On a physical level, the amygdala consumes most of the energy, effectively slowing down the ability of the prefrontal neocortex to act" (Ross, 2014, Chapter 2). In other words, in times of high anxiety, we no longer can think rationally, or what others may call consciously.

Banaji gives this example:

In order to just think about where implicit bias comes from, it's a good idea to think about it as a combination of two things. First, our brains - human brains have a certain way in which we go about picking up information, learning it. If I repeatedly see that doctors are male, and nurses are female, I'm going to learn that. But the second part to implicit bias is the culture in which we live. There is a culture that, for whatever reasons, has led to men being surgeons and women being nurses. If I lived in a culture where the opposite happened, I would have the opposite bias. (How the Concept of Implicit Bias Came into Being, 2016)

So, as humans, our perspective is shaped by the stimuli we choose to recognize and how our brain processes this information. With eleven million bits of data available every second and humans only able to process forty, it is easy to see how each person's perspective can be very different.

II.1.3 *Why does implicit bias matter?*

Knowing how implicit bias works is important because it influences real-world decisions. Devine et al. offers support for this claim:

…accumulating evidence reveals that implicit biases are linked to discriminatory outcomes ranging from the seemingly mundane, such as poorer quality interactions (McConnell & Leibold, 2001), to the undeniably consequential, such as constrained employment opportunities (Bertrand & Mullainathan, 2004) and a decreased likelihood

of receiving life-saving emergency medical treatments (Green et al., 2007). Many

theorists argue that implicit biases persist and are powerful determinants of behavior

precisely because people lack personal awareness of them and they can occur despite

conscious non-prejudiced attitudes or intentions (Bargh, 1999; Devine, 1989; Gaertner &

Dovidio, 1986). This process leads people to be unwittingly complicit in the perpetuation

of discrimination. (2012, p. 1268)

Banaji, Bhaskar & Brownstein say that "Data on implicit or unconscious bias are surprising and

even troubling because individuals and even professionals, whose conscious values reveal no

intent to harm, nevertheless show systematic and selective patterns of decision-making that result

in differential treatment" (2015, p. 184). Figler and Hanon theorize that the unconscious can

impact managerial decisions based on Jung analytical psychology (2008, p. 613). So, if we

believe as Jung did that the unconscious is the most active part of the human psyche, that gives

credence to the idea that a manager needs to marry the unconscious with the conscious to make

effective decisions. Managers are responsible for decisions about who they hire, develop, put on

teams, who to promote or fire, and each of these has the potential to be swayed by unconscious

bias. Based on this theory, it is easy to see how implicit bias factors into a manager's decision-

making process.

II.1.4 *Prejudice linked to bias.*

Research and logic link implicit bias to prejudice. Bias itself is a prejudice (a preference), and

something that is implicit is unknown to our conscious self. So, implicit bias is a hidden or

unconscious bias or prejudice and using proven techniques for changing prejudices will help to

weaken and mitigate implicit biases. Through my research, I realized that bringing awareness to

the bias is essential and then providing motivation for change follows. You can see this same reasoning used by Devine et al. when talking about breaking the prejudice habit:

> Devine and colleagues (Devine & Monteith, 1993; Plant & Devine, 2009) argue that the motivation to break the prejudice habit stems from two sources. First, people must be aware of their biases and, second, they must be concerned about the consequences of their biases before they will be motivated to exert effort to eliminate them. Furthermore, people need to know when biased responses are likely to occur and how to replace those biased responses with responses more consistent with their goals. (2012, p. 1268)

The extensive research on breaking prejudice helped inform my study and narrow down what will work and what does not work to cause change.

II.1.5 *Change: what works and does not work.*

Much of the work to determine what works and what does not work to elicit change in implicit bias is laid out in the "first large-scale quantitative synthesis of research on change in implicit bias" by Forscher et al. (2017, p. 33). The authors searched in PsycINFO and Web of Science and found 5,238 articles fitting their criteria from 1995 to 2015 (Forscher et al., 2017, p. 8). By using trained coders, contacting researchers for further information and ruling out studies that did not have data "required to calculate effect sizes on the implicit measure," the authors came up with a final sample that included 80,356 participants, 343 articles, 494 studies and 573 independent samples. Because of this extensive research, I will rely on the findings from the meta-analysis to drive part of my method and research design. From the 494 studies on implicit bias, the authors determined only three viable possibilities for changing implicit bias, and even then, they found little evidence that changes in implicit bias led to change in explicit bias and/or behavior change (Forscher et al., 2017, p. 39). The three areas where they saw a small change

involved procedures that directly or indirectly targeted associations; depleted mental resources and induced goals (2017, pp. 34-35). The centerpiece of my study – the implicit bias workshop – will focus on directly targeting associations through transformational conversation as part of Contact Theory.

Forscher et al. also put forth that many of the current interventions that attempt to change in implicit bias will not consistently change behavior. The authors call for "1) more reliable and valid implicit, explicit and behavioral measures; 2) Intensive manipulations; 3) Longitudinal measurement of outcomes; 4) Heterogeneous samples; and 5) Diverse topics of study" (2017, p. 40). Except for the longitudinal measurement of outcomes, my study addressed these issues.

II.1.5.1 *What has worked.*

Extensive research has shown that creating awareness of implicit bias is an important part of the behavioral change process. "Arguably the most popular method of reducing bias and enhancing equity in the workplace is by making workplace decision makers and evaluators aware of their conscious and unconscious biases through training and education. Such diversity, anti-bias, or anti-harassment training is based on social psychological research showing that individuals are often unaware of their own (unconscious) biases and must first acknowledge them and then make a concerted effort to keep them in check (Gilbert, Fiske, & Lindzey, 1998)" (Hirsch & Cha, 2017, p. 45).

In Joy-Gaba's research, she was "successful at making people aware of their biases." However, results "showed that the automatic bias education was ineffective at changing participants' judgments and behaviors in which bias could be expressed." She reasoned this was because "participants lacked the motivation to assess the magnitude and direction of their biases." This suggests that awareness is important, but it needs to be coupled with motivation.

One way that Joy-Gaba recommended to motivate participants was "to incorporate experiential content focusing on how individuals can counteract the influence of automatic bias" (2011, p. 114).

She makes a strong case for experiential learning "rather than just describing the evidence" (Joy-Gaba, 2011, p. 5). She cites previous research "that individuals learn better when the material is given experientially rather than simply described (de Haan & de Ridder, 2006; DeRue & Wellman, 2009; Jarvis, 1987; Kolb, 1984; Pratt, 1993)" (Joy-Gaba, 2011, p. 5). She concludes in her study that "giving participants more experiential, rather than descriptive, knowledge on how to combat automatic bias might help individuals learn how to reduce the effects of bias in future situations while simultaneously motivating them with the goal of doing so" (Joy-Gaba, 2011, p. 114). Joy-Gaba further argues that "automatic bias education needs to be experienced in person, surrounded by other participants. Research has shown that the presence of others can facilitate learning (see, for example, Doise & Mugny, 1984) and lead to social comparisons (Kruglanski & Mayseless, 1990). Indeed, the presence of others has been shown to increase self-reflection, allowing members to assess discrepancies between their ideal self and actual self (for a review see Levine & Resnick, 1993)" (2011, pp. 107-108). I agree wholeheartedly, as I have seen the impact of the face-to-face sessions on participants as they learn from not only the facilitators but the other participants. This research legitimizes the use of Contact Theory to employ change in implicit bias and strengthens the argument for longer, in-person interventions. Joy-Gaba seems to support this idea when she says, "automatic bias education coupled with intergroup contact may address all components of the barriers to addressing bias…" (2011, p. 114).

II.1.5.2 What has not worked.

Just as is important to understanding what works when developing a workshop on change is knowing what does not work. Forscher et. al found two specific shortcomings in their meta-analysis studies that I plan to address with my research: sample characteristics and sample topics. "81% of samples were composed entirely of university students," and the majority were white (76.2%) and female (65.6%) (2017, p. 18). "Psychologically, university students are different from the general population (Henrich et al., 2010; Sears, 1986)," so the authors suggest that "combating societal problems such as discrimination…requires exploration of how the problems operate outside of the college campus and answering questions of human nature depends on sampling from a population that represents humankind" (Forscher et al., 2017, p. 34). I addressed these shortcomings in my study by having managers or executives between the ages of 25 and 65 who had at least three years of experience in the Information Technology (IT) industry. In addition, I had a fairly even distribution between male and female participants – representing the ingroup (male) and outgroup (female) in IT.

In addition, Forscher et al. found that "procedures that induced threat, affirmation, or affective states had small and/or inconsistent effects" (2017, p. 33). As I note later in the social identity section, I was hyper-aware of the need to be cognizant of my participants, so the ingroup did not feel threatened, and stereotypes were not affirmed. Joy-Gaba found in her background research that "Most diversity programs focus on historical prejudices (Von Bergen, Soper, & Foster, 2002) and assume that bias is intentional (Jackson & Joshi, 2010; Kalev, Dobbins, & Kelly, 2006)" (2011, p. 113). As such, she suggests that "diversity training programs should use evidence from social and behavioral science on what bias is and how it functions" (Joy-Gaba, 2011, p. 113).

Also noteworthy is the research showing that one-time, sometimes short, one-hour

workshops are not effective. "Although there is no direct evidence about whether one-shot

strategies used at another's behest could produce enduring change, some general dual-process

theories in psychology (e.g., Epstein, 1994; Smith & DeCoster, 2000; Strack & Deutsch, 2004)

suggest that such reductions are likely to be highly contextual and short-lived" (Devine et al.,

2012, p. 1268). Joy-Gaba found in her research that a "shortened automatic bias education was

not effective enough to significantly change participants' beliefs about bias and may not be a

viable intervention to pursue" (2011, p. 105). My six-hour workshop addressed this concern and

showed a more comprehensive model is warranted.

Overall, "research is mixed on whether bias reduction through training actually works

(Kelly & Dobbin 1998; Bisom-Rapp 2001; Kalev et al., 2006; Dobbin & Kelly 2007). In their

comprehensive study of diversity-oriented human resource practices, Kalev et al. (2006) found

that diversity training was largely ineffective at improving the representation of white women

and black men and women in management" (Hirsch & Cha, 2017, p. 45). Contrary to this

finding, Hirsch and Cha found that "policies to reduce bias—namely diversity and related

training programs—are associated with increases in the representation of white women in

managerial positions" (2017, p. 65). However, their research did confirm that "Bias reduction

through training, however, is not effective for black women and black men" (Hirsch & Cha,

2017, p. 65).

Raza argued that "…although the popularity of unconscious bias training is growing,

these sessions cannot be a panacea for all diversity and inclusion issues. Training can't 'cure'

people of bias. The scientific evidence demonstrating the negative effects of unconscious bias is

well documented, but there's still a lot to learn about how to mitigate it" (2016, p.18). This was

the challenge for my study and the advantage. By focusing on evidence-based research, I overcame some of the shortcomings and doubts raised by past research. I also went into the research with "the understanding it is also likely that there is no single 'magic bullet' that, by itself, prompts the regulation of implicit bias and the multifarious changes in concern and awareness such self-regulation brings" (Devine et al., 2012, p. 1277). However, I did want to find a tool that worked, and I did so with transformational conversation. I also knew I needed to create a process model that addressed change and would help me "identify which components of the intervention are necessary and sufficient to produce its distinct effects" (Devine et al., 2012, p. 1277).

II.2   Social Identity Theory

The direct link between social identity (who we are) and implicit bias (unconscious prejudices) can be seen in ingroup/outgroup bias and our tendency to elevate our own perspective. Greenwald and Banaji define ingroup bias as "tendency to judge members of one's own group (in-group) more favorably than comparable persons who are members of another group (out- group)" (1995, p. 11). We tend to associate positive traits with our own group (ingroup) and negative traits with "others" (outgroup).

In this section, I will give an overview of Social Identity Theory as it relates to my study and show evidence of why it is applicable in this context. In addition, I will make the connection between social identity and motivation as an influencer between Contact Theory and implicit bias.

II.2.1   *What is Social Identity Theory?*

The premise of Social Identity Theory is that a person identifies with a particular social group based on a perceived emotional connection with other individuals in that group (Tajfel,

1972), and this association impacts the person's self-image (Tajfel & Turner, 1986). Hogg (2006) further elaborated on a social group as "more than two people" who "identify and evaluate themselves in the same way and have the same definition of who they are, what attributes they have, and how they relate to and differ from people who are not in their group or who are in specific out-groups. Group membership is a matter of collective self-construal – 'we' and 'us' versus 'them'" (p. 115). A person can be a member of multiple social groups, such as those categorized by race, gender, university affiliation, etc. These category associations are at the forefront of a person's mind as a social identity that defines his/her characteristics as a member of those groups and informs him/her "how to think, how to feel, and how to behave" (Hogg, Terry, & White, 1995). People within the social group tend to have comparable viewpoints, values, characteristics (perhaps physical) and interact in similar ways with those outside their group.

Social Identity Theory is "based on some general assumptions: 1) people strive to maintain and improve their self-esteem and a positive self-concept; 2) social group, or category, membership can enhance or lower someone's self-esteem and self-concept; and 3) people evaluate the positive or negative attributes of groups to which they belong compared to those of other groups to which they do not belong, such as for status and prestige" (Miles, 2012, p. 289).

Our culture helps define our social identity and gives us a set of rules to judge others by. As a result, "our identities are formed around this ego identification, we see ourselves as 'right' and the 'other' as 'wrong' or 'flawed' in some way" (Ross, 2014, Chapter 1, "How Rational Are We?"). According to Miles's assessment of the theory from Tajfel and Turner (1979):

…these assumptions lead to general theoretical principles of the theory: 1) people work

to achieve and maintain a positive social identity; 2) positive social identity is based on

favorable comparisons made among groups to which a person belongs (in-groups) and groups to which a person does not belong (out-groups); and 3) if social identity is unsatisfactory, then people strive to leave their current groups and join more favorable groups, or they try to make their current groups more satisfactory. (2012, p. 289).

II.2.2 *Why is Social Identity Theory applicable?*

Much of unconscious bias training on the market now is not evidence-based and does not focus on this ingroup/outgroup dynamic. In my study design I followed the recommendation of Linnehan, Konrad, Reitman, Greenhalgh, and London who have stated that "diversity initiatives should focus on the dynamics between marginalized groups who have had little power in most U.S. organizations and those who historically have held power in these organizations" (2003, p. 1335). More generally, a person's role as part of the ingroup or outgroup can be contextual, but for the most part in "the United States, the list of predominant cultural groups generally includes white people, men, heterosexuals, able-bodied people, Christians, people of higher socioeconomic statuses, those who were native born, and those who are native English speakers, among others" (Ross, 2014, Chapter 5). Ross specifically cites the business culture as an example:

> Business leaders are overwhelmingly male. The cultures of companies have largely been around from a time when even more men were in leadership. This has created a male-dominated cultural model in most businesses. And yet most men don't look at their business cultures as wanting things to be done in 'a man's way.' They see it as wanting things to be done 'the right way,' without even realizing the gender influence in that categorization. (Ross, 2014, Chapter 1)

Based on this research, I focused on the gender aspect of the social identity of the participants in a clinical workshop setting. This allowed me to concentrate on the inequality of the dominant/ingroup (male) and the minority/outgroup (female) dynamics present in the IT workplace. As stated earlier in the dissertation, males make up 65 to 75% of the employee population in the IT industry. However, even though I focused on gender identity as the dominant feature of a person's social identity, I was open to whatever part of a person's social identity emerged.

Reynolds et al. described the influence this way:

The social identity perspective offers new insights into developing more effective and better targeted behaviour change interventions and ones that may have greater success in addressing entrenched social issues. The value of working via identity is in its capacity to affect large numbers of people (for whom the identity is meaningful) effectively and efficiently. What is being argued here is that to change individuals formed into a group, it is necessary to understand and affect social identity – its content and salience in the context relevant to the behaviour. These processes enable the emergence of new sources of social influence (leadership) and ingroup norms which are fundamental to behaviour change. (2015, p. 53)

Research has shown that social identity is helpful to explain "the relationship between identity, norms and behavior" (Reynolds et al., 2015, p. 52).

What this means is that social identity offers a path towards better understanding the process of behaviour change. If people's group memberships and associated social identities change, so too can behaviour (e.g., Reynolds et al., 2010). It is also possible that the meaning of existing groups (e.g., women, members of organisation X) – what

'we' value and believe in – is redefined, requiring a change in expected and accepted

(i.e., normative) patterns of behaviour. Put simply, as definitions of who 'we' are and

who 'we' are not shift, so too does what 'we' (should) do. (e.g., Haslam, Reicher, &

Platow, 2011; Turner, Reynolds, & Subašic, 2008). (Reynolds et al., 2015, p. 53)

As this applies to my study, I hoped to have the dominant group (males) understand the

perspective of the non-dominant group (females) and vice versa, so that each group would begin

to shift their idea of norms – their own implicit biases.

II.2.3 *Motivation to change.*

It is clear from the established research that motivation is a key factor that must be

addressed to make a change in implicit bias. And motivation is related to social identity. The

ingroup is less motivated to change because they feel they have more opportunities to lose

privilege. The outgroup is more motivated to change because they feel they have more

opportunity to gain privilege. Given the wrong motivating factors, the ingroup will push back on

any training. So, motivation is influenced by your social identity – whether you are a part of the

ingroup or the outgroup. For those not in the ingroup, Ross states, "As a general rule, we are

more attentive to our identity and the feeling of otherness when we are in a non-dominant group"

(Ross, 2014, Chapter 2). And "Previous research has shown that members of dominant groups

respond less positively to diversity interventions than do members of historically excluded

groups (Alderfer, 1992; Kossek & Zonia, 1993)" (Linnehan et al., 2003, p. 1351).

By addressing the participant's motivation (based on his/her role as part of the ingroup or

the outgroup), I felt I could better engage him/her to participate in the conversational part of the

intervention. By allaying their anxieties and demonstrating that everyone has implicit bias, I

thought I could create commonalities between the ingroup and the outgroup. I was laying the

groundwork for both groups to be open to the intervention, especially the conversation part of the workshop. This goal was justified by the findings from Joy-Gaba's study: "that the bias education impacted not only the majority members, but also non-majority members is important; it provides evidence that the education is effective at showing that every person has bias" (2011, p. 112).

I also theorized that the motivation to change might also come when the similarities of the outgroup and ingroup began to show. Specifically, I believed the contact between the male and female participants would allow them each to better understand each other's perspectives and forge a connection. Reynolds et al. suggest as much:

> When people's social identity is salient, they perceive themselves and others as an ingroup – as cognitively grouped as 'us' who are more alike than contrasting others or 'them.' This similarity creates an expectation that 'we' ought to agree and respond in the same way (in reactions, judgement, attitudes, behaviour) and motivates people to bring about such agreement (Haslam, Oakes, Reynolds, & Turner, 1999; Turner, 1991). Such motivation for agreement enables mutual influence to occur opening up the possibility that one's theories, expectations and beliefs about oneself and the world can change. Knowing that those in the same psychological ingroup do X rather than Y, or do more of X, is motivating and can affect one's own behavior. (2015, p. 51)

This shift in perspective is exactly what I hoped to accomplish with the transformational conversation component of the workshop.

II.2.4 *What is not working.*

There is extensive research on what is not working to make a change in implicit bias – focusing on historical prejudices and assumed intentional bias, shaming, mandatory attendance

and divisive diversity rhetoric. "Research has shown that most diversity training programs focus on historical prejudices (Von Bergen, Soper, & Foster, 2002) and assume that bias is intentional (Jackson & Joshi, 2010; Kalev, Dobbins, & Kelly, 2006)" (Joy-Gaba, 2011, p. 111). Joy-Gaba points out two potential problems with programs of this type: "(1) participants may resent being required to attend and (2) participants – particularly white men who are more highly represented in senior positions in most organizations – may feel targeted and offended by the implication that they could be prejudiced. Moreover, by focusing on historical prejudices, these programs may fail to communicate the message that everyone has bias" (2011, p. 111). In the worst-case scenarios, some "social psychological research suggests, training can even backfire; by educating employees and managers about biases, training can activate the very stereotypes it aims to dispel (Heilman, Block, & Stathatos 1997; Bielby 2000; Reskin 2000; Tinkler, Li, & Mollborn 2007; Tinkler, 2008)" (Hirsch & Cha, p. 45). In this section, I will look at the problems, according to the literature, with shaming and using divisive diversity rhetoric.

II.2.4.1 Shaming.

The literature is clear that shaming the dominant group is not effective. For those in the majority/dominant group, they may not even be aware that their biases are impacting those in the minority group. And because the biases may even be beneficial to the dominant group, there is little motivation to change. (Ross, 2014, Chapter 7). As a result, focusing on this dynamic will be challenging and perhaps uncomfortable for the participants in the workshop, as Linnehan et al. argue:

> The influence that racial identity has on people's motivation to engage in the types of behaviors consistent with a pluralistic organization may depend on group membership. Those who strongly identify with the dominant group's culture are likely to be

comfortable in the traditional working environment predominated by values of White,

able-bodied, heterosexual men (Harquail & Cox, 1993). As such, they may see little

reason for the organization to develop a more pluralistic culture. (2003, p. 1332)

In other words, the white males are going to be more satisfied with the status quo and less likely

to be open to change. In addition, Linnehan et al. point out "Members of dominant groups may

believe that prejudice, stereotyping, and discrimination do not exist (Bobo & Kluegel, 1993;

Tougas & Beaton, 1993). They may feel wrongly accused by efforts to raise awareness of these

issues (Messner, 1998). Finally, they simply may be unwilling to recognize that their success is

partly a result of their unearned advantages (Jacques, 1997)" (2003, p. 1337). Lai and Nosek,

social psychologists at the University of Virginia, "analyzed eighteen different strategies to see

which are the most effective for addressing unconscious bias." They found that "exhaustive

efforts to get people in the dominant group to understand the plight of people in non-dominant

groups can often create a greater sense of difference between the groups and…reduce the sense

of connection and empathy to the 'out group'" (Ross, 2014, Chapter 7). Put more plainly – those

in the dominant/ingroup may feel their social identity is being challenged and see diversity

training as a threat and punitive. "This is one of the reasons there is such strong white male

backlash around diversity and inclusion issues. White men are reacting to being blamed and

'made' to feel guilty for things they often don't realize that they're doing, or for privileges they

don't realize they have had for longer than any of them have been alive" (Ross, 2014, Chapter 7).

Over the years, I have seen many diversity efforts focused on shaming, and I could see

the visible reaction from the white males in the room – arms crossed against their chests as a

visible barrier to change. As Ross says in his book, "When we treat people who don't know they

are demonstrating bias in a way that suggests there is something evil about them, we not only put

them on the defensive, but we also lose the ability to influence them because they have no idea

what we are focused on" (Ross, 2014, Chapter 7). These findings suggest that implicit bias

training that focuses on the outgroup at the expense of the ingroup will isolate and alienate the

ingroup – the precise group you need at the table to enact change in an organization. With this

research in mind, I focused on allaying the anxiety of those in the ingroup by not limiting the

training to divisive implicit biases focused on race or gender. Instead, I focused on broader

cognitive biases. Two additional findings from the Pettigrew & Tropp's meta-analysis show that

intergroup contact increases liking and can reduce anxiety and threat, which in turn, diminishes

prejudice (2006, p. 767). This was relevant to my study, as I anticipated contact through

conversation would allow the ingroup not to feel targeted by the implicit bias training.

II.2.4.2 *Divisive diversity rhetoric.*

The use of divisive diversity rhetoric has also been shown to be ineffective in reducing

bias. The blatant use of disparity statistics and focusing directly on gender or race as the only

aspect of social identity in an implicit bias training is not effective in creating behavioral change

in the dominant group. Dover, Major and Kaiser found in their research that the "rhetoric of

diversity can result in inaccurate and counterproductive beliefs" (2016, p. 3). Here is an example

of the findings from their experiment:

> We put young white men through a hiring simulation for an entry-level job at a fictional
>
> technology firm. For half of the 'applicants,' the firm's recruitment materials briefly
>
> mentioned its pro-diversity values. For the other half, the materials did not mention
>
> diversity. In all other ways, the firm was described identically. All of the applicants then

underwent a standardized job interview while we videotaped their performance and measured their cardiovascular stress responses.

"Compared to white men interviewing at the company that did not mention diversity, white men interviewing for the pro-diversity company expected more unfair treatment and discrimination against whites. They also performed more poorly in the job interview, as judged by independent raters. And their cardiovascular responses during the interview revealed that they were more stressed.

Thus, pro-diversity messages signaled to these white men that they might be undervalued and discriminated against. These concerns interfered with their interview performance and caused their bodies to respond as if they were under threat. Importantly, diversity messages led to these effects regardless of these men's political ideology, attitudes toward minority groups, beliefs about the prevalence of discrimination against whites, or beliefs about the fairness of the world. This suggests just how widespread negative responses to diversity may be among white men: the responses exist even among those who endorse the tenets of diversity and inclusion. (Dover et al., 2016, p. 3)

Some researchers suggest diversity policies can even cause more problems for the outgroup: "even when there is clear evidence of discrimination at a company, the presence of a diversity policy leads people to discount claims of unfair treatment. In previous research, we've found that this is especially true for members of dominant groups and those who tend to believe that the system is generally fair" (Dover et al., 2016, p. 2).

The takeaway from this evidence bolsters my argument that we need to address the social identity of a person to tap into his/her motivation to weaken his/her implicit biases and ultimately

lead to behavior change. As you can see from the literature review, I am not the first to link social identity and implicit bias. However, my contribution that we take social identity into consideration when designing interventions for implicit bias and behavioral change furthers the literature.

So, any training created needs to be careful to not alienate the dominant group through rhetoric, must do more than spread awareness, and motivate both the ingroup and outgroup to change. Again, the prior research bolsters my argument that a person's social identity influences behavioral change. Who they are will impact how they react to the training. Members of the ingroup will react differently than members of the outgroup. For some, peer pressure will be a huge motivating factor to change their behavior. Shaming will not work for most. So, my challenge was to understand how social identity influences behavior – more specifically behavioral change.

For my study, I looked at gender as a part of social identity, with women in the outgroup and men in the ingroup in the information technology industry. A person's social identity is much broader than gender, but I started with this group to narrow the scope of the research.

II.3   Intergroup Contact Theory

Contact Theory offers the key to changing implicit bias and the conduit to consider a person's social identity when applying the intervention. Extensive research has shown that contact results in a reduction in prejudice. In this section, I will give an overview of Contact Theory as it relates to my study and describe why it is applicable. Also, I will introduce the concept of transformational conversation as part of Contact Theory and as a key component for weakening implicit bias.

II.3.1 *What is Contact Theory?*

Harvard psychologist Gordon Allport, who is credited with the Contact Hypothesis (also known as Contact Theory and Intergroup Contact Theory), says that interpersonal contact is an effective way to reduce prejudice between majority and minority group members (1954). Allport found in his studies that "the trend of evidence favors the conclusion that knowledge about and acquaintance with members of minority groups make for tolerant and friendly attitudes" (1954, p. 267). In addition, he found that "Prejudice (unless deeply rooted in the character structure of the individual) may be reduced by equal status contact between majority and minority groups in the pursuit of common goals. The effect is greatly enhanced if this contact is sanctioned by institutional supports (i.e., by law, custom or local atmosphere), and provided it is of a sort that leads to the perception of common interests and common humanity between members of the two groups" (Allport, 1954, p. 281).

Since Allport's publication of the theory in *The Nature of Prejudice* in 1954, extensive research has been done on Contact Theory and its use in the reduction of prejudice. However, it was not until 2006 that a comprehensive meta-analysis was done by Pettigrew & Tropp. Their research offers the most complete study of Intergroup Contact Theory. They looked at 713 independent samples from 515 studies and determined that "Results from the meta-analysis conclusively show that intergroup contact can promote reductions in intergroup prejudice" (Pettigrew & Tropp, 2006, p. 768). "Indeed, 94% of the studies revealed an inverse relationship between intergroup contact and prejudice" (Pettigrew & Tropp, 2013, Chapter 2).

II.3.2 *Why is Contact Theory applicable?*

"At its most basic level, Intergroup Contact Theory contends that we can reduce prejudice between groups by encouraging interactions between them" (Pettigrew & Tropp, 2013,

Chapter 2). The idea of reducing prejudice through contact is backed by extensive research in social psychology (Vezzali, Hewstone, Capozza, Giovannini & Wölfer, 2014). Devine et al. found in their research on prejudice that "contact with counter-stereotypic others provides grist for counter-stereotypic imaging as well as providing opportunities for individuation, perspective taking and stereotype replacement. Similarly, perspective taking can enhance stereotype replacement and individuation by encouraging people to see the world from the eyes of a stigmatized other" (Devine et al., 2012, p. 1270). Wilson found in his studies of diversity training that the programs that are effective "increase contact between the participants and the targets of prejudice" (2011, p. 192). Wilson points to more than five-hundred social psychology studies that support Allport's original hypothesis: "Bringing groups together under the right conditions is one of the most effective means of reducing prejudice" (2011, p. 193).

Extensive research has also shown that positive interactions between the ingroup and outgroup can alter beliefs about each other. "Research on extended contact has shown that knowledge of intergroup contact works to motivate individuals to engage in contact via macrolevel influences—by shaping perceptions of ingroup norms, by mesolevel influences, by reducing group-based anxiety, and by shaping a sense of individual efficacy at the micro level" (Ron, Solomon, Halperin, & Saguy, 2017, p. 216). A study from Lai and Nosek's revealed "that one of the most effective ways to begin to 'reprogram' our biases toward certain groups is to expose people to counter-stereotypes or exemplars of the particular group in question. When we are exposed to examples of people who have been successful or are appealing to us from the group in question, our generalized negative biases toward that group seem to begin to diminish" (Ross, 2014, Chapter 7). Wilson found that people can change their subconscious narratives about others when exposed to positive narratives about members of their own group interacting

with those in the group where they harbored the bias (2011, p. 195). Devine also encouraged people "to encounter and engage in positive interactions with out-group members. Increased contact can ameliorate implicit bias through a wide variety of mechanisms, including altering the cognitive representations of the group or by directly improving evaluations of the group (Pettigrew, 1998; Pettigrew & Tropp, 2006)" (Devine et al., 2012, p. 1271). Banaji et al. specifically call out positive forms of contact as a way of changing unconscious bias: "This is a worthy path to develop as it can lead to changes in an individual's behavior" (2015, p. 184).

In addition, Pettigrew and Tropp determined that change in perceptions about other participants can be extended to the entire outgroup: "Not only do attitudes toward the immediate participants usually become more favorable, but so do attitudes toward the entire outgroup, outgroup members in other situations, and even outgroups not involved in the contact. This result enhances the potential of intergroup contact to be a practical, applied means of improving intergroup relations" (2006, p. 766). Pettigrew and Tropp concluded that "intergroup contact theory now stands as a general social psychological theory and not as a theory designed simply for the special case of racial and ethnic contact" (2006, p. 768). This finding supports extrapolating Contact Theory beyond race.

II.3.3 *Transformational conversation as a tool.*

Based on Contact Theory, I theorized that a specific part of contact – transformational conversation – would lead to change in implicit bias. This is a specific type of conversation – conversation between two or more people who could be categorized as having different social identity characteristics. By narrowing my focus to transformational conversation as part of Contact Theory, I added to the body of knowledge of what works in weakening implicit bias.

Conversation as a method of change is backed by the research into empathy and perspective shifts. Baron-Cohen defines empathy this way: "Empathizing is about spontaneously and naturally tuning into the other person's thought and feelings, whatever these might be" (2003, p. 21). "Empathy helps you tune in to someone else's world; you have to set aside your own world – your perception, knowledge, assumptions, or feelings" (Baron-Cohen, 2003, p. 23). Baron-Cohen further offers the tie between empathy and conversation: "Empathy makes real conversation possible. It allows you to check in with the listener to make sure you are fulfilling their needs and not hijacking the conversation…" (Baron-Cohen, 2003, p. 23). "Empathy allows for a reciprocal dialogue because you are constantly making space in the conversation for the other person, through turn-taking. Empathy allows you to adjust your conversation to be attuned to theirs" (Baron-Cohen, 2003, p. 24). For each workshop participant to understand "the other's feelings" and "take their perspective," they needed to employ empathy (Baron-Cohen, 2003, p. 26). This weakened implicit bias and led to behavioral change.

The cognitive component of empathy described by Baron-Cohen is relative to tie together perspective and empathy: "understanding the other's feeling and the ability to take their perspective" (2003, p. 26). "More recently, development psychologists have referred to this aspect of empathy in terms of using 'theory of mind' or 'mindreading'" (Baron-Cohen, 2003, p. 26). During the conversation piece of my workshop, participants needed to employ empathy to shift their perspective. The research has shown that a perspective shift is needed for behavioral change, so conversation is a critical piece to changing implicit bias.

II.3.4 *Transformational conversation for behavioral change.*

Research from Linnehan et al. can also be interpreted as a push for conversation as a tool for behavioral change:

Guided by the perspectives of the practitioners, as well as existing theory of organizational culture and intergroup power relations, we were able to identify five behavioral goals that may help organizations to develop a pluralistic culture and to reduce discrimination with the aim of maximizing performance and quality of work life within an organization. The first two, (a) interacting frequently with members of other groups, and (b) discussing issues of diversity and cultural backgrounds, are grounded in the organizational culture literature; while theories of intergroup relations are the basis for the remaining three, (c) discussing potentially difficult issues with members of other groups instead of avoiding them, (d) avoiding the use of offensive language, and (e) confronting and educating those who use offensive language or tell offensive jokes and stories. (2003, p. 1335)

All five of these goals have one thing in common – conversation. But "(c) discussing potentially difficult issues with members of other groups instead of avoiding them" (Linnehan et al., 2003, p. 1335) is the inspiration for transformational conversation. From there, I hypothesized how a conversation between people with different social identities could help shift perspectives and weaken implicit biases enough to cause behavioral change.

Social scientists are continuing to study how contact is best used in a laboratory-type environment. Some argue that the "key is to get people to view the members of the other groups as unique individuals." Others believe that is important for individuals to have "positive interactions with people they view as representative members of another group." And an opposing view maintains that the individual must be able to "redraw group boundaries so that people they previously viewed as outside the group are now viewed as part of their in-group" [Derived from Brewer & Miller (1988); Brown & Hewstone (2005); Dixon, Tropp, Durrhiem, &

Tredoux (2010); Gaertner & Dovidio (2000); Paluck & Green (2009)] (Wilson, 2011, p.195). My

research points to transformational conversation as a key part of contact to help mitigate implicit

bias. By engaging both the ingroup and outgroup in conversation, their knowledge of different

perspectives is broadened, motivating them to change their behavior.

III   RESEARCH METHOD

For my study, I chose a qualitative field study and took the role of a clinician. In this

section, I will outline my research method and explain the reasoning behind my choices.

Building on the idea that much of the current training for implicit bias is not backed by

research, I created a workshop intervention focused on proven techniques and theory. As

demonstrated by Devine et al. (2012), interventions can work for implicit bias. But the

researchers specifically call for more: "Future studies that dismantle the intervention by

systematically manipulating the intervention's components will help identify which components

of the intervention are necessary and sufficient to produce its distinct effects" (2012, p. 1277). To

address this call, I broke the workshop into three components: unfreeze, change and refreeze. I

found all of these pieces were important in mitigating implicit bias, but the conversation piece

was essential.

III.1 Clinical Role

For this study, I adopted a clinical perspective on my fieldwork based on Schein's

definition: "those helping professionals who get involved with individuals, groups, communities,

or organizations in a 'helping role'" (Schein, 1987, p. 11). He includes in this area process

consultants and others "who work explicitly with human systems" (Schein, 1987, p. 11). As a

clinician, I played an active role with the participants. Schein sees the "essence of the clinical

method" is to "draw out of the client 'deeper' levels of data that could obtained only by intensive

listening and the creation of a psychologically safe and supportive environment (Schein, 1969, 1987)" (1987, p. 16). "Clinicians assume that they have changed the system through their inventions, and, through changing it, have been able to watch it in action" (Schein, 1987, p. 31). As the facilitator, I was able to guide the participants through the three parts of the workshop. This role was appropriate because it allowed me to start with "normative models" and then to transition to being more "descriptive," so I could make sense of what was going on in the workshop (Schein, 1987, p. 51).

Schein advocates for training of clinicians through workshops: "For the organizational clinician, the applied training ground is often human relations workshops where sensitivity training and other activities are used to improve the insight and skill of participants through a variety of experiential exercises and activities with the student clinician in a coaching helping role (Schein & Bennis, 1965)" (Schein, 1987, p. 57). With my background as a learning leader in a Fortune 50 company for twenty years, I met the qualifications set out by Schein.

I also chose this method specifically for its link to engaged scholarship: "It is particularly important to develop the scientific status of clinical insight because clinicians are often asked to help higher-level people in organizations and thus get insight into power dynamics and the workings of hierarchies that are difficult for ethnographers and any other categories of organizational scientists to obtain. Such information is critical to the building of better variables and theories in our field" (Schein, 1987, p. 57). Academic business research needs to be applicable and useful to practitioners.

I understand the use of qualitative data and conducting a field study will invite scrutiny of validity and replicability. However, Schein addresses validity: "For clinicians, the ultimate validation test, then, is whether or not they can predict the results of a given intervention. If they

can, such predicted responses validate their model or theory of what is happening. The validation

is in the dynamic process itself and depends not on replication so much as successful prediction.

Replication again comes in at the dynamic process level, however, in that clinicians can predict

that 'every time I do this, the following thing will happen,' or can tell their client 'every time you

do that, the following will happen'" (Schein, 1987, p. 52). As for replicability, by taking the

clinical perspective "one of the assumptions clinicians make is that their very presence changes

the situation and, in fact, changing it is one of the reasons for being present. The clinical process

will always change situations to an unknown degree that makes replication a difficult criterion

unless one finds many cases that display essentially similar characteristics at the outset and

studies them comparatively" (Schein, 1987, p. 53). So, there is a tradeoff with what I am trying

to achieve in the intervention and the replicability of my study. Clinicians often look to

replication to increase their "scientific status," but Schein says that "imposing the traditional

scientific criteria will always find the clinical data wanting" (Schein, 1987, p. 54). He believes

that the best way to "legitimize the data" is the "ability to predict the outcomes of interventions

is the best direction to pursue" (Schein, 1987, p. 54). "For the clinician, it is predicting the

consequences of given intervention that is a primary criterion while replication is typically not

possible anyway in a dynamic system" (Schein, 1987, p. 55). I will rely on the wisdom of Schein

and the reader to understand the importance of the predictable outcome of the intervention.

III.2 Participants

My unit of analysis was both the participant and the smaller groups engaged in

transformational conversation. According to Miles and Huberman, "Qualitative samples tend to

be purposive rather than random" (2014, p. 31). For this reason, my sample included a

purposeful sampling of executives and managers. To study social identity, specifically gender, I

needed executives and managers that differed in gender. Consequently, the criteria for inclusion was that the participant must be a male or female, aged 25 to 65 and a manager or executive in the IT industry with three to five years of experience in the field. For my workshop, I needed a representative sample. I recruited participants based on what Goetz and LeCompte (1984) call "quota selection – identifying the major subgroups and then taking an arbitrary number from each" (Miles & Huberman, 2014, p. 32). I used this strategy to "increase confidence in analytic findings on the grounds of representativeness" (Miles & Huberman, 2014, p. 32). In this case, I purposely aimed for an equal representation of males and females. However, because of attrition, one of my female participants was not able to attend the workshop, so I had four males and three female participants.

III.3 Control Group

In addition, I had twelve participants in the control group, six males and six females. They were all managers or executives in the IT industry – matching the same criteria as the group taking part in the workshop. This group took the initial Implicit Association Test (IAT) and answered the same interview questions as the intervention group. However, the control group did not take part in the workshop or any of the post-workshop activities. The purpose of the control was to compare them to the participant group at the beginning to ensure the participant group was reflective of the larger IT population.

III.4 Intervention Group

I had seven participants in the intervention group. They took part in the workshop and the pre- and post-workshop measurement tests and interviews. From this group, I created seven case studies, with each participant as a separate case study. This multiple-case sampling gave me the confidence that my emerging theory is generic because I saw it "work out and not work out in

predictable ways" (Miles & Huberman, 2014, p. 34). Miles and Huberman suggest "five richly-researched cases as a minimum for multiple-case sampling adequacy," but a "study with more than 10 cases or so can be unwieldy" (Miles & Huberman, 2014, p. 34). I settled for a group of seven to attend the one-day, six-hour implicit bias workshop to make sure I had enough participants for a minimum of representativeness and interaction, but not too many to be unwieldy. Across the case studies and the data from the control group, I looked for underlining patterns to answer my research question. To simplify my data analysis, I initially narrowed my focus to examine the gender identity piece of social identity.

III.5 Measurement

I used the Implicit Association Test (IAT) developed by Banaji, Greenwald and Nosek as a measurement of each participant's implicit bias. Devine et al. offer a simple overview of the IAT:

> The IAT is a dual-categorization task that has good psychometric properties
> (Cunningham, Preacher, & Banaji, 2001; Hofmann et al., 2005) and is linked to basic
> neural and affective processes relevant to implicit race bias (Cunningham, Raye, &
> Johnson, 2004; Phelps et al., 2000). Additionally, in intergroup contexts, the IAT is a
> strong predictor of discriminatory behavior and a better predictor than parallel explicit
> measures (Greenwald, Poehlman, Uhlmann, & Banaji, 2009; but see Blanton et al., 2009
> for an opposing view). (2012, p.1269)

Although Devine et al. (2012) are describing the implicit race association tests, the description is accurate for the other categories offered as part of Project Implicit. For my research, I asked the participants to take the Gender – Career Implicit Association Test (IAT). This test "often reveals a relative link between family and females and between career and males" (Project Implicit,

n.d.). I asked participants to send screenshots with their "D-scores." Intervention participants completed the IAT before and after the workshop. Participants in the control group took the IAT only once. More information on the IAT and results can be found in Appendix A.

I interviewed all participants (both control and intervention) using semi-structured interview questions to allow me to gather information somewhat uniformly, but to also allow flexibility for the participants and the interviewer to give additional input, if applicable. Intervention participants were interviewed before and after the workshop. All participants were given a unique number identifier to keep the responses confidential. (More information on the code identifier and confidentiality can be found in the ethics section.)

IV INTERVENTION WORKSHOP DESIGN

As stated earlier, my research design is a qualitative field study with an intervention, namely a workshop. I used a lot of prior instrumentation, based on the advice of Miles and Huberman: "If you know what you are after, there is no reason not to plan in advance how to collect the information" (2012, p. 39).

For the study, I broke the intervention into three parts to help with data gathering: 1) Pre-assessment of participants, including the Implicit-Association Test (IAT), a short a semi-structured interview on diversity attitudes and workplace attitudes, including demographic information; 2) Implicit Bias training workshop including diary reflections within the workshop and recordings of the conversation; and 3) Post-assessment, including the same IAT and semi-structured interview questions from the pre-assessment.

IV.1 Part 1: Pre-assessment

 IV.1.1 *Pre-workshop interview.*

 All participants, intervention and control group participated in Part 1. I started the

interviews with some basic demographic information to help with data analysis: name, year born,

gender, ethnicity, company and industry, title, job role, number of years as an executive and

number of people managed. I assigned a unique number identifier to all participants to separate

identifying information from the participant data. The code identifier sheet was kept in a locked

cabinet that was only accessible by the research investigators.

 The semi-structured interview questions were based on the behavioral scales used by

Linnehan et al. and adapted for a qualitative study by using open-ended questions (2003, p.

1359). I used the following four questions: 1) What does having a workplace that is diverse and

inclusive mean to you; 2) What is your role in creating a diverse and inclusive environment; 3)

Why is or why is this not important to you personally; and 4) Anything else you would like to

add?

 IV.1.2 *Pre-study IAT.*

 As mentioned in the Method section, I used the IAT as a measurement of each

participant's implicit bias before his/her participation in the workshop. I asked the intervention

participants to take the same IAT at the end of the workshop.

IV.2 Part 2: Workshop

 IV.2.1 *Workshop design.*

 A central piece of the study is the actual intervention – a six-hour workshop. Easterly and

Ricard (2011) in their work on gender bias, specifically call out workshop training as a possibly

effective method for reducing bias. The workshop format is also conducive to the experiential

learning environment promoted by Joy-Gaba's research (2011, p. 108). The workshop allowed me to collect data in a "clinical" setting. The design included three sections based on Lewin's three stages in his model of change. A full description of the workshop is described in the next section.

IV.2.1.1 Workshop Outline.

I researched several models of change, but I found the simplicity of Lewin Model of Change (Unfreeze, Change, Refreeze) best suited for my workshop design. Bernard Burnes, a frequent-writer about Lewin, describes Lewin's three-step model in detail:

A successful change project, Lewin (1947a) argued, involved three steps:

• *Step 1: Unfreezing*. Lewin believed that the stability of human behaviour was based on a quasi-stationary equilibrium supported by a complex field of driving and restraining forces. He argued that the equilibrium needs to be destabilized (unfrozen) before old behaviour can be discarded (unlearnt) and new behaviour successfully adopted. Given the type of issues that Lewin was addressing, as one would expect, he did not believe that change would be easy or that the same approach could be applied in all situations:

The 'unfreezing of the present level may involve quite different problems in different cases. Allport. . . has described the 'catharsis' which seems necessary before prejudice can be removed. To break open the shell of complacency and self-righteousness, it is sometimes necessary to bring about an emotional stir up. (Lewin, 1947a, p. 229)

Enlarging on Lewin's ideas, Schein (1996, p. 27) comments that the key to unfreezing '. . . was to recognise that change, whether at the individual or group level,

was a profound psychological dynamic process.' Schein (1996) identifies three processes

necessary to achieve unfreezing: disconfirmation of the validity of the status quo, the

induction of guilt or survival anxiety, and creating psychological safety. He argued that:

'. . . unless sufficient psychological safety is created, the disconfirming information will

be denied or in other ways defended against, no survival anxiety will be felt. and

consequently, no change will take place' (Schein, 1996, p. 61). In other words, those

concerned have to feel safe from loss and humiliation before they can accept the new

information and reject old behaviours.

• *Step 2: Moving*. As Schein (1996, p. 62) notes, unfreezing is not an end in itself;

it '. . . creates motivation to learn but does not necessarily control or predict the

direction.' This echoes Lewin's view that any attempt to predict or identify a specific

outcome from planned change is very difficult because of the complexity of the forces

concerned. Instead, one should seek to take into account all the forces at work and

identify and evaluate, on a trial and error basis, all the available options (Lewin, 1947a).

This is, of course, the learning approach promoted by Action Research. It is this iterative

approach of research, action and more research which enables groups and individuals to

move from a less acceptable to a more acceptable set of behaviours. However, as noted

above, Lewin (1947a) recognized that, without reinforcement, change could be short-

lived.

• *Step 3: Refreezing*. This is the final step in the 3-Step model. Refreezing seeks

to stabilize the group at a new quasi-stationary equilibrium in order to ensure that the new

behaviours are relatively safe from regression. The main point about refreezing is that

new behaviour must be, to some degree, congruent with the rest of the behaviour,

personality and environment of the learner or it will simply lead to a new round of disconfirmation (Schein, 1996). This is why Lewin saw successful change as a group activity, because unless group norms and routines are also transformed, changes to individual behaviour will not be sustained. In organizational terms, refreezing often requires changes to organizational culture, norms, policies and practices (Cummings and Huse, 1989). (Burnes, 2004, p. 986)

Step 2 is commonly referred to now as "Change," and that is the way I will refer to it in my model.

The Lewin Model of Change is well-accepted in management studies. And it "has been widely used by organizational development practitioners to help nonprofit and business managers understand how to move organizational behaviors or attitudes to a new, desired level and keep them there. For such practitioners, these ideas are fundamental for successful planned organizational change, and they offer insight into the change process for all organizations" (Medley & Akan, 2008, p. 494). But the model has both followers and critics. For a full review, see the article by Burnes (2004). In addition, there are those that point out that the model ascribed to Lewin was not developed by him at all. Instead, they claim it is an amalgamation built on the only part of the model truly penned by Lewin – the unfreeze component (Cummings, Bridgman, & Brown, 2016). However, for this study, I will use the change as three-step model (CATS) as it is often attributed to Lewin and as referred to in the previous paragraph.

The flexibility of the model allowed me to take an active role as a clinician. Schein describes this role as the following: "The clinician starts with an action research model of the organization built on the assumption that the only way to understand an organization is to change it, and that the only way to understanding, therefore, lies through deliberate intervention and the

deciphering of the responses to the intervention" (1987, p. 32). This model is a good representation of the individual change I am trying to achieve through the workshop. And it supports the purpose of clinical studies as defined by Schein: "If the clinician is working from a process consultation model (Schein, 1969, 1987) he or she is further enjoined to learn how to manage the relationship to enhance the client's ability to learn to continue to solve his or her own problems" (Schein, 1987, p. 21). Because this process model is non-traditional it aligns with Schein's advice:

> One of the arguments I have made for a process consultation model over the traditional model of the consultant as an expert or doctor is that the process model makes it easier for clients to let their hair down and reveal what is really bothering them because the process model, by assuming that clients will be able to help themselves, empowers clients and helps them to overcome the psychological trauma of having to admit a problem in the first place. (Schein, 1987, p. 48)

This is important because I wanted to be able to empower the participants to recognize and mitigate bias outside of the workshop setting. This contrasts with some of the current training available now, that is strictly knowledge sharing.

IV.2.1.1.1 Unfreeze.

The first part of the workshop focused on unfreeze. I opened with some optical illusions and brain games to demonstrate that sometimes our brains are not always giving us accurate information. These illusions also demonstrated that everyone has bias, and the exercises helped to reduce anxiety in the ingroup about what to expect in the workshop. I then gave an overview of the workshop and segued into the awareness piece of the workshop, providing information on what implicit bias is and how the brain works. Research has shown that participants need to be

aware that they have implicit biases before they can progress through the model (Joy-Gaba, 2011).

Through the workshop, we worked to bring implicit bias to the conscious level. This was done through awareness (a necessary piece) – the unfreeze part of Lewin's model. As mentioned in the literature review, bringing to light that everyone has implicit biases allows everyone to relax – not become defensive about their own social identity. This is an important piece to motivate participants to stay engaged and to elicit the desire to change. They are not being singled out for "prejudice." We talked about some of the most common cognitive biases (example: confirmation bias, bandwagon bias, etc.), how these biases may impact decisions and ways to mitigate them (Kahneman, Lovallo, & Sibony, 2011). Participants then examined their own implicit biases through workshop exercises.

IV.2.1.1.2 Change.

The change part of the model is critical and evoked by the employment of cognitive empathy through contact – specifically transformational conversation. Through transformational conversation, the participants encountered a different perspective and began to shift their thoughts about a person of a different social identity. I gave the participants tools to help them with their perspective shift, including the Ladder of Inference and Bias Feedback Loop, referenced earlier in the theoretical framing section.

In my study, I looked directly at the shift in males when they encounter the female perspectives, the shift in females when they encountered male perspectives and possibly even the shift in females when they encountered other female perspectives. However, I was open to other perspective shifts, as well.

During the change section of the workshop, I asked participants to reflect on a time implicit bias played a role in a situation. As an application of Contact Theory and transformational conversation, I paired up participants with someone of the opposite gender and asked them to share these experiences with their partner. Participants took turns sharing and then listening. Using the tools I had given them earlier in the workshop, they were able to advise each other and talk thoughtfully about what they did well and what they could have done differently. By giving participants an opportunity to practice, I enabled the participants' "ability to learn to continue to solve his or her own problems" (Schein, 1987, p. 21). This is important for the last part of the Lewin Model – Refreeze.

IV.2.1.1.3 Refreeze.

The last part of the workshop focused on refreeze. I reinforced the lessons learned during the workshop and asked participants to reflect and create a plan for what they will do differently, how they will implement change and how they will hold themselves and others accountable. They shared their written plans with a partner of the opposite gender – another opportunity for transformational conversation. By creating a part of the workshop focused on sustaining change, I committed to the workshop participants that as a clinician I would equip them in ways to reinforce the messages and learnings from the workshop so that they will maintain the behavior change.

IV.2.2 *During the workshop.*

The nature of the process model helped me understand how social identity impacted the weakening of implicit bias and the role of conversation in change. I asked participants to log their reflections throughout the workshop using a diary method. This gave me a better understanding of the change process. I asked the participants to reflect on the module they just

completed and answer the following questions: 1)What are the key takeaways; 2) How did this module impact your feelings toward implicit bias; and 3) Based on what you learned in this module, what do you plan to do differently, if anything? I added one additional question after module two: What did you take away from your conversation with your partner(s)? The participants wrote their answers on paper and turned them into me at the end of the workshop. In the analysis of the diary reflections, I was looking for two things: 1) Did each workshop module learning coincide with the stated purpose I was trying to achieve in the Lewin model (i.e., Unfreeze, Change, Refreeze); and 2) What impact did each module have on the participant?

IV.3 Part 3: Post-Workshop Assessment

At the end of the workshop, I asked the participants to take the same IAT taken pre-workshop. I also used the same semi-structured interview questions employed in the pre-workshop with the addition of one statement: "The conversation and interaction parts of the workshop played an important role in my feelings about implicit bias." Participants replied by choosing an answer from the following Likert scale: Strongly agree; Agree; Neither agree or disagree; Disagree; or Strongly Disagree. I then asked them to elaborate on their answer. I recorded these in-person interviews using a voice recorder. I transcribed all the interviews and used NVivo to code the interviews. With this approach, I was seeking to learn if the behavioral change techniques, specifically transformational conversation, that I employed had an impact on the implicit bias of the person. Also, I wanted to understand the role that identity played in a person's implicit bias and behavioral change.

IV.4 Data Analysis

My research resulted in both structured and unstructured data: pre-workshop semi-structured interview recordings transcribed; IAT results pre- and post-workshop; diaries of

reflections during the workshop; a recording of the entire workshop; and post-workshop semi-structured interview recordings transcribed. I also coded directly from the video recording of the workshop. All data was coded in NVivo. Charmaz says that "Coding gives you tools for interrogating, sorting, and synthesizing hundreds of pages of interviews, fieldnotes, documents, and other texts" (2014, p. 109). This concurs with the assessment from Miles and Huberman: "In qualitative data analysis, a code is a researcher-generated construct that symbolizes and thus attributes interpreted meaning to each individual datum for later purposes of pattern detection, categorization, theory building, and other analytic processes" (2014, p. 72). Through coding, I was able to make sense of the data and compare and contrast the participants, understand their intentions for behavioral change and discover changes in implicit biases.

From the data, I wanted to answer the question: To what extent can a conversational strategy engage peoples' social identity to weaken their implicit bias and support behavioral change? Based on the data gathered, I was seeking to determine whether 1) it doesn't work at all for anyone; 2) it works differently for x and y; or 3) it works all the time for everyone.

IV.5 Ethics

This study followed the six key principles set out in the Economic Social and Research Council (ESRC) Framework for Research Ethics. I ensured the quality and integrity of my research by using reputable sources for information and using proven measures to collect data. I worked closely with my department chair, advisors and committee to ensure the study was worth doing and added to the current body of knowledge on the subject. I sought informed consent from all participants and sent the informed consent form to participants through email, prior to the workshop. They sent it back through email or waited to sign on the day of the workshop. They had an additional opportunity to review the informed consent prior to the workshop

beginning and then had an opportunity to privately sign the consent form before they began any part of the study process. All participants participated voluntarily and could stop participating at any time. Whatever they decided, they did not lose any benefits to which they were otherwise entitled. I respected the confidentiality of my research respondents by using a unique number identifier for all participants to separate identifying information from the participant data. For reporting purposes and ease of reading in this dissertation, I assigned fictitious names to correspond to the unique number identifiers of the participants. The code identifier was kept in a locked cabinet only accessible by the research investigators. All information provided was stored in a locked office and in a locked cabinet. The data was password protected and stored on a computer with firewall technology. Video and audio recordings were stored on a recording device and secured in a locked file cabinet. The video and audio recordings were erased from the recording device after transcription was complete. No participants are identified by their true names in this dissertation. Race, gender and years in IT are the only identifying attributes used throughout the dissertation because they are relevant to the topic and analysis. In the study, no harm came to participants. They did not have any more risks than they would in a normal day of life. If they experienced any discomfort or become upset during the workshop or interviews, they could have left the workshop or chosen to not answer a question or end the interview. The research was independent and impartial. I was not paid by anyone to undertake this research, and I reported my findings impartially.

V   RESULTS

As mentioned earlier, the study resulted in a tremendous amount of unstructured data. For the participant group, I had their pre-and post-workshop interviews; transcripts for the pre-workshop semi-structured interviews; diaries of reflections during the workshop; transcripts for

the partner conversations on implicit bias; transcripts for the partner plan conversations; written plans for change; a recording of the discussion portions of the workshop; and transcripts for the post-workshop semi-structured interviews. I also coded the overall workshop video directly and wrote memos on observations. I had structured data with the pre- and post-workshop IAT D-scores for the participants and the initial IAT D-score for the control group. All of this data was brought into NVivo and coded.

Originally, I thought that I would be able to group participants into "ingroup" and "outgroup," with men being the ingroup and women being the outgroup. My thoughts were that the strong social identity of gender would allow me to look at the commonalities across the females in the workshop and compare those to the commonalities found across the male participants. I expected stark differences in how they reacted to the content of the workshop. However, what I found is that the men and women could not be grouped cleanly into "ingroup" and "outgroup" because while they shared gender, there were commonalities across both genders and differences within the gender groups.

V.1   Six Findings from the Research

I analyzed the data, guided by the process model (unfreeze, change, freeze) and the participants' own words, to identify six findings from the research:

1. Awareness is an important part of implicit bias training, but it doesn't go far enough to evoke change.

2. Transformational conversation is key to change. Participants need interaction to understand other perspectives and to get feedback on their own implicit biases.

3. Training must address the entire social identity of the participant – not just race or gender.

4. Participants want tools to help them work through their own implicit biases and those of others.

5. Participants need to create a plan to change to solidify the learning.

6. The participants' implicit biases were weakened, and change occurred.

I will address each of these findings and present evidence from the data to illustrate how the conclusion was drawn. I will then pull all the findings together to show how they address my research question: To what extent can a conversational strategy engage peoples' social identity to weaken their implicit bias and support behavioral change?

V.1.1 *Unfreeze.*

V.1.1.1 Awareness not enough.

My first finding is that awareness is an important part of implicit bias training, but it doesn't go far enough to evoke change. The first module of the workshop was focused solely on awareness – what is implicit bias, how the brain works and types of cognitive biases. My assessment that awareness is not enough stems from my analysis of the diary entries of the participants after the first module.

"Aware" was the top word used by the participants in reflection one. "Aware" or "awareness" was used by six of the participants and more than once by three of the participants. Devin wrote:

"I will be more aware and intentional toward mitigating bias."

Reviewing all the reflections, I do not doubt that awareness is important, as evidenced by Denise's reply:

"I enjoyed the discussion and examples. [It] opened my eyes and mind to different bias that I was not aware of 'by label.' I will start considering if I am being biased throughout

my day. I am now aware, and I must work towards recognizing and correcting as
needed."

The reflections show that participants give value to the knowledge they gained in the first
module about awareness, but there is little talk of change. Yet, there is a need for more to help
them mitigate bias. Nancy wrote:

"I am happy now that I can be more aware of it [bias] for myself and of it for others
around me. I want to make sure as a leader I try to watch for situations and act where I
see bias impacting others or myself. I really am learning a lot and hope that I get some
skills to take away as we progress."

Equally as important to the argument that awareness is not enough is the obvious lack of
transformation that is present after the first module. Kamil provides a good example of this
thinking. For his key takeaways he wrote:

"Luckily, I do never (consciously) tend to judge, but I found that this has to be revisited."

So, after the first module, Kamil was beginning to gain more self-awareness and questioned his
perception that he does not judge or make assumptions, but he is not completely convinced of his
own implicit biases.

The module has awakened the participants and given them new knowledge on implicit
bias, but they still feel they need guidance. They need more to help them implement change
based on their newly found awareness. And for some, they need more convincing of their own
implicit bias. They can easily see now the implicit biases around them, but it's another thing to
see it in themselves. If I stopped the workshop at this point and gave no further instruction, the
participants would walk away with a great deal of knowledge about implicit bias, but the

reflections tend to show that the participants are looking outward at those around them, rather than inward at themselves, as expressed by Tracy:

> "Appreciate the purpose of building awareness as a path to holding people more
> accountable for bias… especially in the workplace, but in different environments too."

So, my finding is that awareness is a very important part of learning about implicit bias, but it is not enough to weaken implicit bias. Participants need more.

V.1.2   *Change.*

V.1.2.1 Transformational conversation.

My second finding and the one at the heart of my research question is that transformational conversation is key to change. The Cambridge Dictionary defines conversation as: "an informal, usually private talk in which two or more people exchange thoughts, feelings, or ideas" (Conversation, n.d.). This is precisely the definition I am referencing in my research. Going into the study, I felt participants needed interaction to understand other perspectives and to get feedback on their own implicit bias scenarios, so I specifically set up one transformational conversation in module two and one in module three.

During the workshop, the participants broke up into groups – two groups of two and one group of three. The groups were mixed gender with at least one female in each group. The participants were asked to reflect on a time when implicit bias was a factor, whether that was their own implicit bias or that of another person directed towards them. After reflecting on this, I asked them to share their experience with their partners. After the small group interaction, we came back together as a larger group, and participants shared their experiences, as they felt comfortable. I did the same for the plan conversation the participants had in the third module. In

addition, for analysis, I paired this coding with the coding I did on the post-workshop interviews to get a full picture of the impact of the contact the participants had through the workshop.

Because of my previous experience with transformational conversation as part of the implicit bias workshop, I was not surprised by the role it played in further weakening implicit bias. What I was surprised about was the extent of that role. Analyzing the conversations between participants, I traced moments of realization that went beyond insight to actual intent to change. I will use two out of the three conversations to illustrate my point.

V.1.2.1.1 Mark and Denise.

Mark and Denise's interaction was interesting. Denise is an African-American woman working in an IT role with seventeen years of managerial experience. Mark is a Caucasian male with twenty-four years of management experience in the IT industry. On the surface, they seem to come from very different backgrounds. In the beginning, Denise was sitting back, looking like she wasn't really sure what Mark was going to say. Mark shared his experience of starting a new career path in academia after thirty years in the IT industry. He felt he was being treated as if this was his first job, "as a 26-year old," by other academics. Mark is hesitant and trying to paint a picture of his situation, but he is afraid to call it bias until Denise validates that for him. Denise says he is a victim and encourages him. Mark agrees with her and opens up more.

Denise:　　Yeah, you are a victim of it as well as.

Mark: Yeah, no, definitely the victim of some bias. No. So, um, how does it make me feel? Very uncomfortable? Because again, they're putting me, as we just saw in the video, in a box I don't belong.

Denise:　　Right, exactly.

Denise then begins to identify with Mark - Mark doing well with the students; Denise being a good manager. She creates a tie to herself and shifts to using the collective pronoun "our."

Denise: Wow. Very interesting, but you are probably being very effective with the students, right?

Mark: Yeah.

Denise: It's kind of like being in IT. I guess. I've been in there for a lot of years. But as, when I first joined this company, I got manager of the year, my first year. Yeah, I was just doing what I knew I was supposed to do. And my thing was when I first had my interview…it's a thankless job.

Mark: Right.

Denise: Our, our rewards come from the inside. I mean, I call all this external stuff noise because it is. It will distract you.

Mark: Right.

Denise's reflection two showed the impact of the module on her viewpoints. She talked about the value of her conversation with Mark: "My partner discussion allowed me to learn about outgrouping. He gave a great example of outgrouping with his career. It opened more thinking and analyzing for me when interacting and observing situations. I will "rethink" making assumptions." This seems like a confirmation of my observation that early in the partner conversation piece Denise was sitting back with her arms crossed, looking at Mark as if to say, "Okay, white male, what are you going to tell me about implicit bias?" Her whole demeanor changed as the conversation unfolded, as reflected in her statement about rethinking "making assumptions." When I talked to her about the role of the conversations in the workshop, she said

the following: "It helped a lot. You get to hear other stories, not just a lecture. You get to interact with the people and personalities."

As for Mark, he wrote the conversation gave, "Confirmation of bias in my situation (me subject to bias) and that my efforts for feedback were appropriate (per the ladder)." Because of the feedback from Denise, he felt validated. Mark said on two occasions how valuable the conversation was to his understanding: "As far as today's conversation, we needed it. It was very important." And as a very analytical thinker, the conversation helped with his processing of information: "Well, I mean one way to make sense of something is to talk about it, right? So if you can get people talking, it actually enables your sense making abilities and for them. And for them, when they hear other people talking, it may actually help them…moves the conversation forward."

For Mark and Denise, the conversation was valuable and helped weaken bias. With Mark, he felt validated and came to understand that everyone can experience bias. Denise was moved to question her own assumptions about race and bias. I consider both of these positive changes.

V.1.2.1.2 Tracy, George and Kamil.

The conversation among Tracy, George and Kamil was remarkable for a different reason. They were able to discuss a sensitive implicit bias about race that would most likely have remained hidden, if not for the forum provided by the workshop. Tracy is an African-American female working in a role that is IT focused with five years of experience as a manager. George is a Caucasian male with thirty-five years of experience in the IT industry. And Kamil is a male from Sudan with fifteen years of management experience in the IT industry.

As I said earlier, the format for the conversation was that each participant shared a moment when implicit bias played a role – either directed toward him/her or from his/her own implicit bias. George shared about his interaction with a "terrifying" African-American man.

"I'm out in the parking lot, and I'm walking in by myself, and there is um, there's uh, another young man coming in — black guy, long dreadlocks, a big strong looking guy real young. And we're walking in and initially, you know, kind of like, you know, when you're walking, 'Okay. There's a person. There is a person there. Okay, no big deal.' And then he keeps looking at me, you know. So now it's like [making radar sound] 'beep, beep...' [laughing] Why, why is he looking at me?"

Tracy and Kamil listened intently, but respectively. Tracy looks like she knows where this conversation is going but is supportive, so George continues:

"And he walks over and says, 'Hey, do I, do I know you?' and I'm looking at him like, 'I don't think so.' I slowed down, and then he stopped. So I kept walking, and he said, 'No, really, really, I know you.' So I stopped, and I was like, 'I really don't think you do. I don't recognize you.' Now I'm getting…I'm getting scared. I, you know, my initial fight or flight thought was like starting to kick in…"

George wraps up the story by saying that the young man turned out to be a former neighbor who had grown up, so he did not recognize him. He questioned if using the Ladder of Inference would have helped him. Tracy tries to help him by telling him he had selected the wrong data at the bottom of the ladder: "The information you were selecting wasn't helping you." And they continue along this path for a bit and then moved on to Kamil's story.

The value of George sharing his story was not entirely clear until I read his key takeaways in his second reflection: "Recognize that I have biases, recognize which biases I have.

Use the Ladder of Inference to work on my biases and attempt to control them." He used the word "control" again in his final reflection when talking about the training: "[It] expanded my realization of my biases, how to analyze and control." So, he has obviously gone beyond just being aware of his biases to actually thinking about how to mitigate and control them. For him, the conversation played an important part in that change in his thoughts; in his words:

> "The conversation in here…it gave me different perspectives on other points of view.

> And it also validated a lot of thoughts and feelings that I had about the topics, the biases."

Based on his reflections and plans, George was obviously aware that his own biases were playing a role in his reaction in his shared story, but the workshop conversation gave him a safe environment to talk through his biases and receive helpful feedback without judgment.

I did a follow-up interview with Tracy to learn more about how she felt about her exchange with George. I thought she might have felt defensive or offended, but she surprised me with her response. She said George had "qualified why he thought the person was terrifying," with hand gestures showing that the young man was "a couple of feet above his head," so she understood "the guy was fairly intimidating." Tracy continued,

> "I guess being an African-American, I guess I'm used to people having, you know,
> maybe that perception."

I was then astonished by what she said next about the conversation.

> "It was nice that he felt comfortable enough to have that conversation with us, especially
> with me being there and maybe trying not to offend me but at the same time trying to
> explain his story at the same time. So that was nice because some people aren't brave
> enough to have that type of conversation with other people. I was even surprised in that
> sense that he felt comfortable enough to bring forth, out of all the examples in the world

he could have picked potentially, you know, the thought was that he felt comfortable and safe enough in our group to bring that up and have a conversation without maybe possibly feeling judged by myself or by Kamil or the whole group. So I would say that would be a positive about the interaction in the conversation."

So, again the opposite of what I thought she would say. Instead of offended or upset, she felt George was "brave." This revelation made even further sense when I read Tracy's final reflection: "The conversations provided additional examples for deeper understanding." She saw "Having conversations as a tool for learning." Tracy had taken a conversation topic that could have easily alienated her and learned from it. She has allowed herself to put aside her own social identity to see George's perspective. This shift is further evidenced in her post-workshop interview:

"…first I should be more open-minded to the differences between people and how they may look at things differently than I do. And kind of before reacting to people's tendencies, like they have a very strong position against something, being aware that there may be other things happening either with them or with me, and that may be biases or lack of awareness, lack of understanding."

When I asked Tracy about the role of the conversation in weakening implicit biases, she shared how it added to her own perspective:

"So it makes it more relatable when you hear a conversation which other individuals are sharing experiences that may be similar to yours. You're like, 'Oh. Okay. Yeah, I can directly relate to that.' But even more is when they give you experiences that you haven't had. It totally adds a new dimension because you're like, 'Oh, man. I never really thought about that.' How that might have affected someone and which once again, if I ever run

into that experience, now that I have more information and insight because I've heard

someone else's experience with conversation. So instead of it being one person, like the

facilitator giving me information, which is just a one-on-one exchange, now it's a

conversation among people. So it just broadens the experience and the learning. It makes

it more convincing too. It's like more pieces of evidence. If you tell me something, I have

you as one piece of evidence. If there are other people involved, now I have more pieces

of evidence that makes it maybe more believable or less believable in my mind."

The value of the conversation for George and Tracy was different but equally important.

For George, he had the opportunity to share his bias and receive feedback without judgment. For

Tracy, it was more about understanding the perspective of others so that she could replace

judgment for understanding. I do not think either one of these changes would have occurred

without the transformational conversation.

V.1.2.2   Social Identity.

My third finding is that training must address the entire social identity of the participant –

not just race or gender. As I said earlier in the dissertation, I expected that there would be strong

associations in IT with women as the outgroup and men as the ingroup. In fact, much of the work

being done to address implicit bias in IT is focused on race and gender. However, my research

strengthens the idea that this is misguided. Training associated with only aspect of a person's

social identity is an oversimplification of the complex factors that converge to create a person's

social identity – namely the years of life experiences, personal interactions and individual

learnings that are unique to each person. My research shows that broad generalizations about

certain groups, i.e., females or males or a particular race or ethnicity, are unreliable and will

ignore certain nuances of implicit bias. For example, you cannot broadly say that all males have

an implicit bias against females in the workplace. This may be true in some instances, as my research showed. But it also not true, as my research also showed. The D-scores from the participants' Implicit Association Test show that some males actually have less implicit bias when it comes to associating females with family and males with career than the female participants (See Appendix A). Here are few examples from my research.

V.1.2.2.1 Mark.

As I said in an earlier reference, Mark is a Caucasian male. He was an interesting case right from the beginning. Mark was reluctant to participate in the workshop. He said he did not want to get into a full-blown discussion on race. He understood as a white male in a diversity-focused class that he could be seen as the perceived poster boy for all that is wrong with diversity in IT. It took a lot of reassuring to get him to join the workshop, so he was coming in defensive right from the start.

Mark told me in the post-workshop interview that at the beginning of the workshop he was quickly disengaging because of the "brain teasers" – exercises to show that your brain isn't always giving you accurate information. His feeling was that I shouldn't start by telling him he is wrong:

"… I'm being told that I'm wrong, especially when I don't know the literature."
This first part of the workshop was actually intended to quickly engage the participants and put them at ease by showing everyone has bias. Unfortunately, in Mark's case, I did just the opposite. Even though Mark is only one voice out of the seven, learning that I had alienated a participant made me rethink my approach. In all the workshops I have done over the past five years, I had never received this feedback before, so I felt I had made an unfair generalization about Mark's social identity based on previous experiences.

V.1.2.2.2 Kamil.

As a refresher, Kamil is a male from Sudan. As the only non-American in the workshop group, Kamil offered unique insight into the idea of diversity and inclusion and unconscious bias. He sees his differences as opportunities. I appreciated his insight and his participation because he elevated the conversation in the room beyond physical differences.

In the pre-workshop interview, Kamil said that diversity and inclusion in the workplace means a "place for innovation and creativity." So, he came into the workshop with a positive view of diversity and inclusion and awareness of implicit bias. Kamil felt his role was to work across the multiple cultures and multiple countries to make sure all are doing their individual jobs but that they are also collaborating. He said diversity and inclusion are important to him because "if we're having only one perspective, we may not be able to target larger audiences." What was really unique about Kamil was his ability to see his own diversity as a strength and not a hindrance: "It enhances my ability to handle things more effectively rather than being stranded to very narrow views." He feels his ability to go from culture to culture gives him more business opportunities.

Again, I could have gone a typical route and boxed him in as a male or black, but I would have been doing him a great disservice. I would have missed his unique viewpoint that his diversity was actually an advantage for him. So, the idea that facilitators can come into implicit bias training with their own American viewpoint on race is limiting.

V.1.2.2.3 Devin.

Devin had a similar viewpoint to Kamil, but slightly nuanced. When I asked him what having a diverse and inclusive workplace means to him personally, Devin shared his experiences

growing up in a segregated South as an African-American and the impact this made on him. He spoke highly of the opportunities he had:

"At [my company] I had a lot of leaders take a chance on me – of all colors and genders."

This was an interesting idea that Devin felt he had benefitted from diversity, so I probed deeper asking him if he thought diversity played a role in his opportunities. He said,

"I do. I think diversity was a role in that without a doubt. I believe also, candidly, that they were encouraged strongly by senior management at that time that diversity is important in our company, to our company, not because it's just the right thing to do. But from a business standpoint, it is beneficial for our business results. And I believe during that period of time when there was that focus on diversity, and there was an increase in diversity across minorities, women and beyond…at [the company], it helped to save [the company], to be quite honest with you."

In general, my initial perception based on the literature was that those in the outgroup tend to bear the brunt of implicit bias. Devin was in the ingroup as a male, but he was in the outgroup as a minority. But by limiting him to those two categories, I had erroneously reduced his race to a liability and his gender to his advantage.

V.1.2.2.4 Denise.

Coming into the workshop, I struggled with understanding if Denise's race (African-American) or gender (female) played a strong role in her social identity. In her pre-workshop interview, she was a bit reserved in the first part of the interview but quickly opened up as we progressed. When asked what having a workplace that is diverse and inclusive means to her, she replied:

> "It means a lot to me because having a variety of people, resources, because all people have different experiences that they can share or bring to the table, as they say. It allows you to actually think beyond just what sitting in front of you."

But when asked about her role in creating a diverse and inclusive environment, she replied that she was in charge of hiring, but does not consider diversity:

> "Um, I really don't look at it. I really didn't look at any of that. Um, because I was looking at their skill set and now yes, we tried to bring in as we were interviewing individuals, a variety of diversity or ethnicity, different people as far as interviewing. But hiring, it was kind of whatever the skill set was and how they did, however they did on the interview."

She further clarified this response:

> "It is so important when I'm looking at a candidate just to make sure that we get a variety, but it's not as important once we go through the interview process. I don't see, I see individuals once we are in an interview and that's because I want to look at the skill set more than anything. It's more about the need of the company or the team."

When I probed further to find out what diversity and inclusion meant to Denise personally, she waffled (her own word) and then said,

> "As a woman? I never really thought about it that way because I've been in a man's world all my career pretty much. Um, so I really haven't thought about it as I said, I mean, I haven't thought about it. I think about the skillset and the need because I think I have been given opportunities. I don't think it's because of my race or being a female. I think I have been given opportunities because of the skill set and the need that I could fill or bring to the table."

So my impression was that Denise viewed herself as working as an equal with the men in her company – not as an outgroup. But then as the workshop progressed, Denise gave an example of how she had been talked down to at work by a male peer because of her gender. And then she had an interesting exchange with her group after I showed a video of what it would be like if the roles of women and men were reversed in typical office situations.

Devin: Do you think bias is a problem within the organization? Or do you see it just a way...

Denise: I don't think in our group, in IT, it's a problem. But in the company, yes.

Devin: You feel that way? And thus something like this could be useful... [referencing the workshop]

Denise: Oh, absolutely.

Devin: ...toward at least helping the organization to get along better and resolve conflicts?

Denise: I would say just show the video and not say a word and just walk. That's the meeting.

Devin: The last video with the reversal.

Denise: Yes, just show that and meeting adjourned [laughs].

So, for Denise, the gender bias is evident to her when she is asked about it and encouraged to talk about it. But on her own before the workshop, she did not recognize the bias, or she was in denial. The takeaway for me is that if I had come in with a workshop focused on race, I would have completely missed this hidden realization with Denise.

All of these examples illustrate the danger of focusing on only gender or racial bias. With Mark, it was clear that a workshop focused on race would have completely turned him off from

listening to the material or even joining the workshop. With Devin and Kamil, I could have made the mistake of assuming that their race had hindered their careers. In the case of Denise, I thought gender bias would be at the forefront of her mind, but it turns out she needed some prodding to see it. However, a workshop focused on gender bias would have missed the realization she came to that even white males experience implicit bias, which led her to examine her own assumptions.

In all of these cases, I had the benefit of the pre-workshop interviews. Because of this, I was able to adapt the workshop and broaden the content to address cognitive biases that cut across all races and genders, so the participants could find themselves in the examples I provided and the ones provided by the other participants.

Social identity is important, but you have to look at each individual's broad social identity – not any one aspect of it – and take into account the whole of that identity to inspire change. To narrow someone's identity down to only race and/or gender as part of the change approach is oversimplifying a person's complex identity created over many years and hardwired with a myriad of experiences and assumptions. What is needed is a workshop training that cuts across all aspects of a person's identity, namely going beyond awareness of implicit bias to dig deeper into the cognitive biases that manifest in everyday interactions with everyone and focusing on mitigating those.

On the surface, these two claims seem to contradict each other, or at least offer some tension between them: 2. Transformational conversation is key to change. Participants need interaction to understand other perspectives and to get feedback on their own implicit biases; and 3. Training should address the entire social identity of the participant – not just race or gender. However, on closer examination, it is clear that the two can safely coincide in the intervention.

The social identity of any person is multi-faceted so that the participants can find both differences and commonalities between themselves and another. The key is to acknowledge the differences while searching for similarities, so you can internalize the perspective of another and realize that your perspective is both unique and limiting.

The definition of transformational conversation is key here because it defines the importance of setting up the right kind of conversation to empower change. The transformational conversation about implicit bias is impactful because each person's experience is unique, despite commonalities that make the experience identifiable. The differences are what make the participants see a diverse perspective, but the commonalities are what bring the two participants together. It is very clear that the interaction is what will trigger the moment of awareness and the motivation to change. However, manufacturing that moment of awareness artificially by priming the interaction with what you as a clinician feel is the "right" outcome is tricky because you can be accused of tainting the result. In my intervention for this study, I was very careful not to influence the participants' reflection on implicit bias, so they could share any example of a time that implicit bias impacted their lives without constraining their realm of possibilities. The evidence from the intervention is that this pursuit allowed examples from race, gender, and age to work style and confidence in working with global teams to emerge.

So the overall point is that flexibility is key, but guidance can also be prescriptive, if necessary. If you are going into an intervention with a very general goal to increase diversity or diversity development, then an open trajectory is desirable – let the participants set the agenda for the transformational conversation segment. However, if you are going into the intervention with a desired goal in mind, such as increasing the number of women in leadership at your company, then it could be advisable to prime the conversation with some guidance about what

the transformational conversation should entail. For example, you may say, "Think about a time that your gender or another person's gender was a factor of implicit bias in your life." This is a way to direct the conversation while still allowing the participants freedom to choose what incident they would like to share with their partner – accessing their entire social identity, but still focusing on one aspect that is salient to the end goal.

Even if the transformational conversations are primed, I carefully designed the workshop to help identify broad cognitive biases, not just racial or gender biases. The education about implicit biases and the tools introduced can apply to any situation, not just ones dealing with race or gender. However, this same education and these tools could apply to race and gender. Depending on the needs of the sponsor or the goal of the education, these two pieces could coexist harmoniously.

V.1.2.3 Tools.

My fourth claim is that participants want tools to help them work through their own implicit biases and those of others. I would almost use a stronger word like need to express the eagerness of the participants to address their own implicit biases. The length and tone of the workshop awakened an urgency inside them to "correct" the bias. But there is an equal need to understand and separate out when bias is acceptable and needed from when it is unacceptable and hurtful.

Early in the second module, I introduced two tools to help them mitigate implicit bias: the Ladder of Inference and the Bias Feedback Loop. I elaborated on both of these tools in the Theoretical Framework section. During the workshop, I also talked heavily about two books: Kahneman's *Thinking Fast and Slow* (2011) and Banaji and Greenwald's *Blind Spot* (2013). All of these tools were heavily referenced by all of the participants in their reflections and their

plans. The tools gave the participants something to take away from the workshop to help them

feel more in control of their actions going forward. Here are some examples:

Devin wanted a chart of all the biases and said:

> "Combatting bias takes work. Development of bias identification skills is key. I will work
> more actively in securing feedback. I will use the feedback as education and to combat
> the bias."

George was impressed with the Ladder of Inference as a tool:

> "The pool of data and what is selected based on assumptions, conclusions, beliefs, all can
> lead to people who are in the same situation, with the same data can come to very
> different conclusions and actions. Ladder of Inference to identify and address bias is a
> good tool."

Mark will also use the ladder, but he plans to do more.

> Mark said, "Keep the Ladder of Inference method available as a tool to ensure I don't
> subject people to my bias. Pay attention to bias literature and understand how to mitigate
> bias."

Like Mark, Tracy had a similar plan to use the ladder and read the books I introduced during the

workshop. Denise also illustrates this need to do more beyond the workshop:

> "Insert more of the feedback loops. I'm very life learning focused, so I just thrive on
> continuous learning and picking up new things."

The takeaway for me as a researcher is that the participants want tools to be able to use in

whatever situation is thrown their way. The purpose of the workshop was to help the participants

develop skills to weaken and mitigate biases in all contexts. Not having tools as part of the

training is a disservice to the participants and makes them dependent on others (in this case me

as a facilitator) to identify all possible scenarios of implicit bias and instruct on how to combat those. With over 150 cognitive biases identified, this is nearly impossible.

V.1.3 *Refreeze.*

V.1.3.1 Plan.

My fifth finding is that participants needed to create a plan to change to solidify the learning. The third and final module of the workshop was focused on the participants creating an individual plan for change. Each participant answered two questions to create their plan: 1) What are you going to start doing as a result of the workshop; and 2) What are you going to stop doing as a result of the workshop. After creating their plans, participants were asked to share them with a partner. Again, I paired the participants up, making sure each group had a male and female. One group had two males and one female. By looking at their replies and analyzing the subsequent conversation transcripts, I could see that all participants had intentions to change. This last exercise helped to bring all the pieces of the workshop together, as they thought back over the past six hours about what they had learned and how they would apply it to their behavior. Here are some examples of what participants wrote they would start doing:

Kamil: "Incorporate different perspectives and possibly rank them equally."

Nancy: "Share knowledge with others."

George: "Attempt to reduce some System 1 actions to allow System 2 to provide better decision making re: pre-mortems, open discussions."

Tracy: "Review & refresh myself occasionally on bias literature to keep it conceptually in my field of view. Stop and listen to my (and others) strong reactions to something to see if there is a bias acting out."

Here are some examples of what participants wrote that would stop doing:

Devin: "Stop making fast judgments."

Mark: "Going up the ladder too fast."

And Denise had a particular action she was going to stop doing. In her conversation on her plan, she said the following:

"So I'm going to stop making assumptions. I said that, and I am going to start hearing. Because a lot of times I hear, 'Blah, blah, blah, blah, blah, cause I've already gone to the end. I know what you're saying. And I've gone to the end. I don't say, 'Blah, blah, blah out loud, but my brain is processing something else."

Her presumption of what will be said could be based on any number of biases, so by stopping to really listen, she can change her typical behavior. In fact, all of the entries in the participants' plans and conversations illustrate the intention they have to implement change in their own lives. Their plans also supply the bookend of the workshop and the process model.

V.1.4 *Outcome.*

My final finding is that the participants' implicit biases were weakened and change occurred. The entire workshop was set up with a change in mind – cycling through unfreeze, change and refreeze. Each module built upon the previous one to work toward change. The evidence of change is apparent in both Nancy and Kamil.

V.1.4.1 *Nancy.*

Nancy had a fairly dramatic transformation. She went from being fairly passive in her role in diversity and inclusion to be inspired by the workshop. Nancy came into the workshop with a relatively blatant selective perception bias. She perceived a diverse environment as one where everyone just gets along, but this perception ignores the tension that can exist between ingroups and outgroups. Dearborn and Simon offer this explanation of selective perception:

"Presented with a complex stimulus, the subject perceives in it what he is 'ready' to perceive; the more complex or ambiguous the stimulus, the more the perception is determined by what is already 'in' the subject and the less by what is in the stimulus." (1958, p. 140). Nancy has filtered the world around her to suit her own needs – she is only hearing and seeing what coincides with her existing viewpoint.

During our pre-workshop interview, Nancy talked about what having a diverse and inclusive workplace meant to her. She described it as "very peaceful" and "quiet." She described the environment as "not having to bring that with you" and working without any "colors and genders or anything around." She feels in a diverse and inclusive workplace you would not be looking at "anybody from any kind of lens." Nancy is almost idyllic in her words, as she does not see the tension that naturally occurs when you bring people with different social identities together in a work environment. She wants everyone to get along and not bring "that" into the workplace. For the most part, she has remained inoculated from bias in the workplace, but she is now starting to see that change as she grows older and evidence of age discrimination has come into her purview. Nancy laments she is being prohibited from contributing because of her mature age, but she was torn between complaining and just getting along, "not rocking the boat."

However, she does see some value in being an advocate for those that cannot or will not speak up: "I need to go figure out how to…in a non-intrusive way, figure out how to make sure they're included and get them included." The hesitancy she expressed tends to point to the idea that she again perceives non-inclusion as a problem to be solved in a subtle, almost gradual way.

Nancy's post-workshop answers were almost a complete 360 in comparison to her pre-workshop answers. Her selective perception has been weakened because of the various

perspectives she encountered during the intervention. She has broadened her thinking. On what it means to have a diverse and inclusive workplace, she said:

"It's having one that is open to everyone's opinions" and everyone "can feel open and feel free to share anything…and there's no bias. There is bias, but it's accepted for what it is."

She has gone from "not seeing color" or addressing it in the workplace to having everyone "feel open and free to share." Her role creating a diverse and inclusive environment has changed slightly also. She has gone from not only speaking up for others to "make sure everybody's open to share and to "make sure they feel comfortable to a certain extent, but if they look uncomfortable when I'm asking them to maybe talk to them later." Nancy also seems to understand better why inclusion is an important part of the workplace. She wants to create an environment where people can "be themselves."

And lastly, Nancy concluded that being quiet, as she described a diverse and inclusive workplace in the pre-workshop interview, is not always a good thing. She realized that sometimes she might need to offend to cause change because it "might help somebody else at the same time." Most importantly, she feels "more empowered to go back to the workplace (and be aware) and consciously deal with bias on level two when needed." So she has gone from someone who is reluctant to "rock the boat" and disturb the "quiet" to someone willing to offend, if she needs to call out someone else's biases that are preventing an inclusive workplace. Through the intervention, Nancy has come to understand that her selective perception is not serving her well. And her final reflection and plan show here intention to change.

V.1.4.2 Kamil.

Coming into the workshop, I was unsure what to expect from Kamil. His pre-workshop interview revealed he had a very different idea about diversity than the six Americans in the

room. He saw it as an advantage. During the first part of the implicit bias conversation, Kamil struggled with making assumptions about Nancy. He seemed to be applying gender bias to his interaction, saying she must be multi-tasking because she is a woman, and men don't do that. But Nancy brushed his comments away and explained that there are so many different things being thrown at her during the day: email, phone calls, instant messaging, etc. Her point was that is difficult to slow down and question your biases. Kamil's reflection two seemed to address the influence of this conversation, and he talked about not making assumptions. By the last reflection, it seemed the messaging of the workshop was sticking with Kamil: "Many points discussed help in identifying own bias and additionally provided methods of mitigation." However, I still wondered in the back of my mind about the impact of the workshop on Kamil.

Because of his schedule, Kamil's follow-up interview was scheduled a few days after the workshop ended. I was a little worried that the effects of the workshop may have faded from his memory. However, it was quite the opposite. Kamil said the conversation piece of the workshop was extremely important because he has already seen a difference:

"I have seen in myself a different way of handling things since that workshop day." Intrigued by this answer, I asked if he could give an example. He told me about an incident that happened the day after something dangerous was found inside his children's school. His kids did not want to go to school, and his instinct was to insist they go. Kamil was raised to always confront things. So, he had always pushed his kids to be brave and told them that they should fight the bad people. And this would have been his usual approach to his children's protests to stay out of school. He told me he would have driven them to school himself and made them go in. In his usual way, Kamil would have applied his own cultural bias to the situation. But instead, Kamil said he focused and listened to what his kids had to say. They told him they would be

distracted and unable to listen to their teachers. They would be looking out the windows. And he accepted this, and the kids stayed home that day. Kamil felt like this was a huge moment for him and a direct result of the workshop. He said he laughed when he realized the change in himself.

I could point to other examples of implicit bias weakening within each of the other participants. George offered an example of racial bias weakening. Denise showed evidence of overcoming the curse of knowledge bias by saying she would stop assuming that her common sense was everyone else's common sense. Her examples also provide some evidence of racial and gender bias. In their reflections, Devin, Tracy, and Mark show a more general effect. They plan to hold themselves accountable for their own biases and use the tools to slow down and make changes as needed.

Some may argue that the transformational conversation allowed the participants to simply receive insight into their partner's viewpoint. This is true to a point, but the conversation pushed the participants beyond insight to further transform their thinking about their own implicit biases and motivated them to make a change.

V.2   Answering the Research Question

The purpose of my study was to answer the research question: To what extent can a transformational conversation engage peoples' social identity to weaken their implicit bias and support behavioral change? As I stated earlier in the dissertation, going into the research, I expected one of three possible answers for this question: 1) It doesn't work at all for anyone; 2) It works differently for x and y; or 3) It works all the time for everyone. Based on the evidence from my six findings, I came up with an unexpected answer. It works all the time for everyone but differently for everyone. I found the transformational conversation strategy was successful in weakening implicit bias in all the participants and evoking change. However, because of the

complex nature of each person's social identity, the transformational conversation and workshop impacted each one of them differently. As a result, based on my research, I would conclude that the transformational conversational strategy was successful in engaging each person's social identity to weaken their implicit bias and supported behavioral change.

V.2.1 *Wrap-up of data.*

Because the learning builds with each module as a piece of the process model, I analyzed the overall word frequency of the three reflections put together. The resulting word cloud most strongly reflects the frequency of the following words: aware, system, others, action, different, learning, thinking, assumptions, situations, and feedback. From this word cloud, I zeroed in on the keywords I was looking for from this workshop: aware, learning, thinking, feedback and action.

Figure 4: Word Cloud of All Reflections
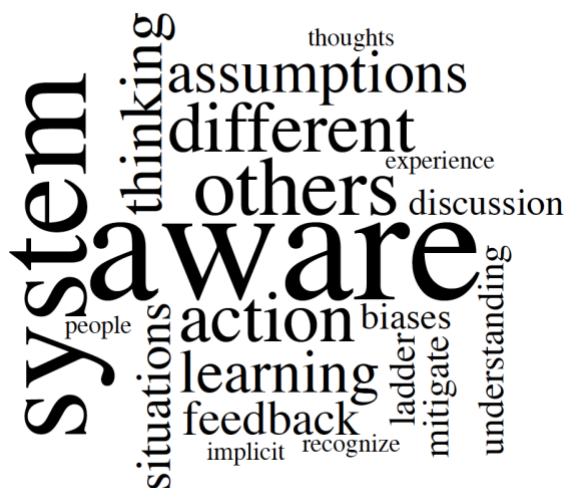
My overall takeaway from the data is that if you go into the training using a process model to 1) raise awareness of implicit bias and help participants recognize cognitive biases in themselves and others; 2) allow opportunities for participants to engage with others in

transformational conversation to learn about different perspectives; and 3) give them tools to mitigate biases and create a plan, you will be successful in creating change.

As far as the results from the IATs, the pre-workshop D-score offered some insight into the incoming attitudes of the participants. However, the post-workshop IAT D-scores proved anomalous. See Appendix A for more details on the IAT results.

VI DISCUSSION

As I mentioned earlier, there were six key findings from my research: 1) Awareness is an important part of implicit bias training, but it doesn't go far enough to evoke change; 2) Transformational conversation is key to change. Participants need interaction to understand other perspectives and to get feedback on their own implicit biases; 3) Training should address the entire social identity of the participant – not just race or gender; 4) Participants want tools to help them work through their own implicit biases and those of others; 5) Participants need to create a plan to change to solidify the learning; and 6) The participants' implicit biases were weakened, and change occurred.

With these findings, I offer several contributions to both academia and practice. I built on previous work that awareness is not enough to change implicit bias and added to the body of literature of what does work. I created a new process model for weakening implicit bias with the key component of change being transformational conversation. For Practice, I created a model for successful implicit bias training that goes beyond the short, non-interactive, awareness-only training that is currently being unsuccessfully deployed. In addition, I showed through my research that focusing on only gender or race when addressing implicit bias is misguided. Practitioners need to consider the whole social identity of participants to motivate them for

change. Finally, I furthered the research on implicit bias by using experienced managers as participants, instead of students.

VI.1 Introducing a New Process Model of Change for Implicit Bias

VI.1.1 *What we knew before.*

VI.1.1.1 *Awareness-only training is not enough.*

Devine et al.'s research showed that motivation to "break the prejudice habit stems from two sources." One is awareness of biases, but the second one is also needed: concern "about the consequences of their biases." The authors go on to say "…people need to know when biased responses are likely to occur and how to replace those biased responses with responses more consistent with their goals" (2012, p. 1268). This is the reason my process model works because I am addressing the motivation with transformational conversation and tools for planning – going two steps beyond awareness. Gilbert et al. spoke of biases as we "must first acknowledge them to then make a concerted effort to keep them in check (1998)" (Hirsch & Cha, 2017, p. 45). We know from the research of Joy-Gaba that her training raised awareness of automatic bias, but it was not effective in evoking behavior change (2011).

My research reinforced this idea. After the module focused on awareness, I found that the participants were very much aware of their own biases and those of others, but there was little talk of change or how they would use this information going forward.

VI.1.1.2 *What doesn't work.*

Extensive research has shown what does not work to change implicit bias: shaming (Linnehan et al., 2003; Ross, 2014), "procedures that induced threat" (Forscher et al., 2017, p. 33), divisive rhetoric (Dover et al., 2016, p. 3), historical prejudice and assumed intentional bias (Von Bergen et al., 2002; Jackson & Joshi, 2010; Kalev, Dobbins & Kelly, 2006; Joy-Gaba,

2011), and "shortened automatic bias education" (Joy-Gaba, 2011, p. 105). Unfortunately, this describes much of the education currently being offered to practitioners.

Practitioners are spending millions of dollars on training that relies heavily on awareness with a focus on brevity. The motive behind this is the perceived need for mass training that is easily replicated and scaled for rollout across the company. The results are more video training with a lecture format or online learning through webinars or other passive-learning formats. And even those formats that tout an interactive element only offer interaction between the computer and the user. Research supports that these one-time, sometimes short, one-hour workshops are not effective. "Although there is no direct evidence about whether one-shot strategies used at another's behest could produce enduring change, some general dual-process theories in psychology (e.g., Epstein, 1994; Smith & DeCoster, 2000; Strack & Deutsch, 2004) suggest that such reductions are likely to be highly contextual and short-lived" (Devine, 2012, p. 1268). Joy-Gaba found in her research that a "shortened automatic bias education was not effective enough to significantly change participants' beliefs about bias and may not be a viable intervention to pursue" (2011, p. 105).

VI.1.1.3 What works.

Previous research has shown several interventions that do help reduce implicit bias and prejudice: intergroup contact (Pettigrew & Tropp, 2016; Devine et al., 2012; Banaji et al., 2015; Ron et al., 2017; Wilson, 2011), presence of others (Joy-Gaba, 2011) and experiential learning (Joy-Gaba, 2011) and targeting associations (Forscher et al., 2017). Pettigrew and Tropp found that "Intergroup contact increases liking and can reduce anxiety and threat, which diminishes prejudice" (2006, p. 767). By including the pieces that do work, I was able to create an implicit bias workshop drawing on the latest research.

VI.1.2 *What I found.*

VI.1.2.1 Weakening implicit bias requires a process: Unfreeze, Change & Refreeze.

Through my research, I described a new way to organize training that will give the desired result – change in implicit bias by the participants. However, the change doesn't simply come through awareness. It comes because of the ability of the participant to see others' perspectives through transformational conversation, increasing motivation to change and then giving participants the tools to change.

Awareness played an important role in the workshop, but as the foundation to have the transformational conversation on implicit bias. The first module on awareness gave the participants a common language and a base as they developed their skills and learned to use the tools given to them in the second module. This is evidenced by the difference in reflection one and reflection two. After reflection two the participants are all talking about awareness and what they have learned about System 1 and 2 (Kahneman, 2011). However, they are not yet talking about change or using tools to mitigate bias. This does not come until after module two, and the transformational conversation element is added. The participants shared their own experiences with implicit bias, and there was a shift in their partner's thinking as he/she began to understand a perspective outside of his or her own. This is evident in the transcripts from the participants' conversations. By the time the participants built their plans for change in the final module, awareness was a piece of the solution, but only as a building block to get them to change. Instead, they talked about how the conversation helped them see a different perspective, they are questioning their own biases, and they are making plans to hold themselves and others around them accountable for implicit biases.

And this sets up the final piece of the process model – refreeze (Burnes, 2004). Motivated participants will develop their own strategy for change by creating a plan based on what they

have learned in the workshop. This is where the need for tools is so important. Very often, we are giving practitioners tips for how to mitigate biases, but this only works if the practitioner is able to identify specifically what the bias is (Kahneman, D., Lovallo, D., and Sibony, O., 2011). For example, we tell them that they may exhibit similarity bias when hiring – the tendency to choose to associate with people just like us. To offset this implicit bias, we tell them to seek out other opinions about the candidate from others. This is offered as a tip, not as a tool. For another common example, confirmation bias is our tendency to seek out information or evidence that confirms what we already believe. The "tip" to mitigate this bias is to ask others for input, vary your sources of information, and talk to others with different viewpoints. The common thread here is conversation. By supplying individual tips without an overall tool framework, we are not making the connection for participants. The transformational conversation piece of the workshop ties these tips together with the opportunity to practice using conversation as a tool and implementing the learning into a plan for change. This is evident in my field work with the participants citing the tools they plan to use in their plans for change, their conversations about their plans and their post-workshop interviews. So, the process model I found successful includes unfreeze: awareness; change: transformational conversation and tools; and refreeze: plan.

VI.1.2.2 *Transformational conversation weakened implicit bias and led to change.*

And that leads to my main contribution – the creation of a new process model for weakening implicit bias with the key component of change being transformational conversation. Transformational conversation takes a step beyond awareness. It gives participants an opportunity to receive feedback on their own experiences with implicit bias and validates their feelings. Several of the participants cited the importance of this validation in their reflections and the overall group discussion. Through listening to their partner's story about implicit bias, the

participant heard a different perspective and was able to employ empathy to identify with the other person. This newfound knowledge tapped into the participant's motivation to change.

As a result, the participants were hungry for tools to help them make sense of their implicit biases. They wanted tools to access this unconscious part of themselves. They wanted to learn more and follow-through with their plans, as demonstrated by the participants saying they wanted to read the books by Kahneman (2011), and Banaji and Greenwald (2013) that I mentioned during the workshop. It was as if the awareness piece of the workshop began to lift the blinds that darkened the room, but the transformational conversation motivated them to want to change. As a result, the participants wanted more – a way to open the window and let in other perspectives and allow for former assumptions to be dissected and debunked.

My research indicates that transformational conversation played a significant role in the change in implicit bias. A study from Lindsey, King, Hebel & Levine "supports the continued use of the perspective-taking method in various diversity training initiatives." They found that "that taking the perspective of others may have a lasting positive effect on diversity-related outcomes, regardless of the focus of training, when compared to setting diversity-related goals or discrediting commonly held stereotypes about stigmatized groups" (2014, p. 614). My research built on this study to show that this perspective shift through conversation is indeed a valuable path to change. Through transformational conversation, participants of the ingroup and outgroup were brought in contact with someone with a different perspective, and they began to empathize with the other person. Because of this empathy, they started to identify with the person they formerly felt was outside of their own group. However, the surprising piece was that I thought the divide in ingroup and outgroup would be clear between gender, but that was not the case. The implicit bias stories shared in the workshop included not just issues with gender and race, but

differences in working styles, starting a new job, age and culture. There was a realization with the workshop participants that implicit bias cuts across all races and genders – everyone feels a part of the ingroup or outgroup in different contexts. It was through transformational conversation that the participants began shifting from their own feelings of being in the ingroup or outgroup and seeing others in either grouping to identifying with the other person and seeing commonalities, instead of only focusing on the differences.

VI.1.3 *My contribution.*

Through my research, I have created a new process model for change in implicit bias. I have broken new ground by including transformational conversation as part of the change in implicit bias. My contribution to the current literature is through my work on transformational conversation as a key part of Intergroup Contact Theory and connecting it to Implicit Bias Theory and Devine et al.'s (2012) work on prejudice. The literature already addressed that contact is an important part of addressing prejudice (Devine et al. (2012); Lindsey et al., (2015); Wilson, 2011) and established that coming into contact with a different perspective was also key to reducing prejudice. The idea of contact being necessary to evoke empathy was addressed by Baron-Cohen (2003). Linnehan et al. brought in the need for "discussing potentially difficult issues with members of other groups instead of avoiding them" (2003, p. 1336). So, my research builds upon the work of all of these and the detailed work of Pettigrew and Tropp (2013) with Intergroup Contact Theory to zero in on transformational conversation as a tool to weaken implicit bias. In this way, I have contributed not only to Intergroup Contact Theory and Implicit Bias Theory, but I have brought the two together to show the power of transformational conversation to mitigate implicit bias.

VI.2 Social Identity Should Be Considered in Implicit Bias Training

VI.2.1 *What we knew before.*

The extensive research of Dover et al. found that white males can easily be turned off by diversity rhetoric, even among those males who are proponents of diversity (2016). This is backed by research from Linnehan et al. (2003) and Ross (2014).

My research builds on the work of Reynolds et al., who argued the "social identity perspective offers new insights into developing more effective and better-targeted behaviour change interventions and ones that may have greater success in addressing entrenched social issues. The value of working via identity is in its capacity to affect large numbers of people (for whom the identity is meaningful) effectively and efficiently." (2015, p. 53). Reynolds et al. found that as "people's group memberships and associated social identities change, so too can behavior" (2015). This is exactly the result I saw in my research. Participants saw themselves as very different from each other at the beginning of the workshop, but as their time together increased, and they engaged in conversation that difference began to dim and similarities emerged. This is as predicted by Reynolds et al. (2015). The participants began to identify with each other, and thoughts of individual identity gave way to "us," "our," and "we."

Training focused on shaming (Linnehan et al., 2003; Ross, 2014) based or gender or on race because of historical prejudice or assumed intentional bias (Von Bergen et al., 2002; Jackson & Joshi, 2010; Kalev, Dobbins & Kelly, 2006; Joy-Gaba, 2011) will not be effective. With my research, I have confirmed these findings and showed that this approach would isolate participants and tend to box them into a stereotype. Broader categories, such as ingroup or outgroup, will even limit your ability to reach your audience and motivate change.

VI.2.2 *What I found.*

Training should focus on the entire makeup of a participant's social identity, not just one aspect. Through my fieldwork, I learned new facts about the role social identity plays in weakening implicit biases and the use of transformational conversation as a behavioral change tool. As a result, I have created a new process model for the change in implicit bias and a new model of the role of Contact Theory and conversation in this change. One contribution to practitioners on this is that a pre-workshop interview is essential for smaller workshop settings. If that is not feasible, a simple survey to help understand the complexity of your audience is needed. You should know who you are addressing to tailor the content to various aspects of the participants' social identity.

I have illustrated what Pettigrew & Tropp found in their meta-analysis that "intergroup contact increases liking and can reduce anxiety and threat, which in turn, diminishes prejudice" (2006, p. 767). The transformational conversation between participants allowed them to each realize that implicit bias is not limited to the ingroup or the outgroup; it is broad and contextual. Previous literature has linked social identity and implicit bias, but it has stopped short of advising facilitators to take social identity into consideration when designing interventions for implicit bias and behavioral change. I am prescribing that taking inventory of the social identities of the participants be a fundamental requirement when designing diversity training.

In addition, training focused on general cognitive bias was effective. In the workshop, I used the work of Kahneman et al. to concentrate the discussion about bias on cognitive biases (2011). With the research of Dover et al. indicating that white males were already coming into diversity training defensive (2016), I thought it was important to focus on implicit biases that are widely held and not solely focus on content that is polarizing, such as gender or racial bias. I

found this effective in my research because the participants were very engaged and showed the intention for behavior change in their final reflections and plan.

VI.2.3 *My contribution.*

I have shown that different parts of each participant's social identity emerge during training, so focusing on one aspect (such as gender or race) is misguided. As a result, I propose that practitioners discontinue their practice of "gender bias workshops" or "racial bias workshop" and start focusing on the entire social identity of participants and creating training that addresses everyone.

VI.3 Implicit Bias Research Is Necessary with Experienced Professionals

VI.3.1 *What we knew before.*

In their meta-analysis, Forscher et al. pointed out that 81% of the samples in the implicit bias studies they researched were made up of university students. In addition, 76.2% were white, and 65.6% were females (2017, p. 18). My research offers a very different profile as all of the participants were experienced managers between the ages of 25 to 65. I had 57% male and 43% female and 57% African-American or African and 43% Caucasian.

Blanton and Jaccard also called for future research to examine unconscious bias in "real-world settings in which personal experiences, social norms, and accountability pressures might override or interact with unconscious influences" (2008, p. 277). Again, I think this is an area where my research was unique. The facilitated workshop was more representative of "real-world setting" because of the interaction of the participants. They were not passively receiving information about implicit bias. They were actively working together and through their biases with the tools I introduced to them.

VI.3.2 *What I found.*

Implicit bias research can be carried out with practitioners. This is important because this particular research would not have been instructive with students. As Forscher et al. suggested, "Combating societal problems such as discrimination and addiction requires exploration of how the problems operate outside of the college campus and answering questions of human nature depends on sampling from a population that represents humankind" (2017, p.34). I needed experienced professionals to understand the entrenched biases of those with several years in the IT industry. The scenarios that the professionals in the workshop shared were unique because of their age and experiences.

Training that is experiential and interactive mimics a "real-world setting." My research answered this call from Blanton and Jaccard (2008). The workshop was very interactive and simulated a work meeting with the participants being equals and fully participatory. This allowed them to share freely and not to feel as if they were in a laboratory environment.

VI.3.3 *My contribution.*

I have demonstrated that empirical research with experienced managers is possible and necessary to understand years of accumulated biases in the IT industry. I have also shown in a realistic setting with IT professionals that training focused on cognitive biases is effective in creating change.

VI.3.3.1 Validity.

I addressed the issue of validity earlier in the intervention workshop design section when I defined my role as a clinician. I knew going in that my role as the facilitator would invite criticism of introducing my own bias into the interpretation of the data. To parry this, I used direct quotes throughout this dissertation as evidence of my findings and to validate my

conclusions. In addition, I had to address the tendency of the participants to give answers that reinforce social desirability bias, the desire to portray themselves in the best light. Again, I address this by using direct quotes from the research. Throughout all the data, the participants seemed to be very honest with their answers to the point of even bringing in unflattering examples.

Overall, the validity of the intervention can be found in the ability of my model to predict what I thought it would, backed by the data from the intervention. When talking about legitimizing data, Schein said, "I believe that the ability to predict the outcomes of interventions is the best direction to pursue" (1987, p. 54). My process model was a guide to what I thought would happen in the intervention, and the data provided the evidence that validated the model.

VI.4 Reflection

Looking back over the research, I would do several things differently. The most obvious one would be that I would wait longer for the follow-up interview after the intervention. For six of the participants, I conducted the interviews directly after the workshop, so they did not have the opportunity to apply their learnings. For the one participant, Kamil, the delayed interview allowed him time to see how the workshop influenced his decision making. Consequently, he had a rich example of how the workshop had influenced his thinking. For future research, I would plan a one- to a two-week follow-up interview.

I would also like to have a mixed-methods model to include some quantitative data with more participants. A pre and post-survey would help better compare the experiences of the participants. In addition, more participants would allow more data. However, I would be hesitant to have more than thirty at any intervention because my experiences show that going beyond that

number constrains the ability of participants to openly engage and share and also limits my ability to interact with each participant.

A big limitation of my research was time. I was doing action research with a time limit, enforced by the doctoral graduation deadline. In an ideal world, I would have liked to do a more longitudinal study that allowed for formidable changes to the intervention based on the feedback of the previous cohort of participants. Or I would have preferred to have a follow-up session with the intervention participants to allow them to share their progress towards eliminating biases. Unfortunately, the time constraint dictated that I report only on the one intervention and draw my research findings from this encounter. Although, I had a tremendous amount of quality data, having data over a longer period of time would better establish if the intervention has behavioral change longevity or if it was a short-lived contextual change.

I was surprised by the findings from the IAT D-score results. Based on prior research, I expected all participants to move toward a more neutral position on associating women with family and men with careers after the intervention. With two participants moving further away from neutral, I question whether the IAT is a good measure of weakening implicit bias or behavior change. There are a few possibilities as to why my research yielded this unexpected result. Perhaps more time is needed to allow the participants to reflect on the intervention and apply the learning. The IAT used may have been too specific, as I did not specifically focus on women and career in my intervention. For some participants, their implicit biases may have been weakened in other areas outside of gender, so the chosen IAT would not accurately reflect weakening or change in these areas. However, I made a choice with the research design to be very general and allow the participants to discuss in their transformational conversations any incident where implicit bias played a role. If I had set stricter parameters, such as, "Think of a

time where your gender or someone else's gender played a role," I may have primed the participants to think more deeply on gender. This could have influenced a different outcome for the two participants that were outliers, but it would not explain how the other five participants had the desired results without this priming. Further research with more participants and focus on the intervention is needed.

VII FUTURE RESEARCH

There are many potential areas for future research. Studies focused on implicit bias and behavioral change on a longitudinal scale are needed. According to Ebbinghaus' forgetting curve, "42% of the material that was completely learned is forgotten after twenty minutes; after one day, 66% is forgotten; and after thirty days, 80% is forgotten" (Reed, 1992, p. 396). This is alarming to think that 20% of the implicit bias training is all that will remain after a little over a month. So, it would be interesting to find out if cognitive nudges will help to keep the learning top of mind and reinforce behavioral change. Forscher et al. specifically pointed out that theoretically, change in implicit bias in the long term requires "repeated pairings of information in the social environment. That means without active efforts to sustain short-term shifts created in the lab, these shifts are likely to be wiped away upon re-exposure to the social environment (Forscher et al., 2017; cf. De Houwer, 2009; Mann & Ferguson, 2017)" (2017, p. 34). If the desired outcome is that we want a more diverse, or at least a representative workforce (representative of the population), then an impediment to that is implicit bias showing up in recruitment, hiring, development, and promotion. To combat implicit bias, you will need cognitive nudges, what Banaji calls "in-the-point reminders" at the point of decision making (Vedantam, 2017). Awareness is a start, but you must continue to nudge until you create a habit. These nudges then change the cultural thumbprint. The culture changes as those in the ingroup

begin to model new behavior, which becomes the cultural norm. So, a longitudinal study measuring the impact of implicit bias training in combination with cognitive nudges is the next logical step.

Practitioners, and particularly sponsors, will understandably have goals for any type of implicit bias training, whether that is greater gender or racial awareness, or some other facet of social identity. Consequently, it is imperative that the intervention meet these goals to be measured as successful. Although I have stressed the importance of not focusing on one particular aspect of a person's social identity, I believe there are ways to influence the direction of the transformational conversation that are key to change. For example, the facilitator could give an example of gender bias just before the participants go into the conversation segment of the intervention. In addition, the facilitator could present positive images that counter stereotypes or ask the participants to think about an encounter when implicit bias about the particular attribute played a role in their lives. However, I would say that this last approach may tend to tax the traditional ingroup because it narrows their choices of experiences.

Research has shown that "diversity training complemented by other diversity initiatives" was more effective than "isolated diversity training" (Bezrukova et al., 2012, p. 215). Consequently, more research should be done on measuring the impacts of an integrated diversity strategy with implicit bias as part of a longer-term effort to change the company culture. My research focused on the IT industry, but the findings may apply to other areas, as well. Further research should be done with other industries.

An interesting area to explore is the research of DiTomasco and her focus on favoritism. In her research, she argues that most of the bias literature focuses on the "bias against" rather than the idea of "bias for" that is rampant in the workplace (2015, p. 73). DiTomasco says that

we should be spending time looking at favoritism as the culprit for the lack of diversity in corporations, over racism and discrimination (2015). It would be interesting to frame an entire diversity workshop around this approach and compare that to a workshop that is dedicated to eliminating racial bias. I would suspect the ingroup would be more receptive to this approach because of the reasons I outlined in my own research.

Finally, I would suggest more research into how to use the IAT as a measurement tool for behavioral change. In my research, the IAT was not particularly conclusive about the change in implicit bias. The qualitative results show change, but the pre-workshop D-scores compared to the post-workshop D-scores were not as clear. See Appendix A for more detail. But this is an area that could benefit from more research.

VIII   CONCLUSION

Over the past several years, IT companies in the US have publicly disclosed their diversity numbers and made vows to increase their number of under-represented minorities and women. They have employed implicit bias training as a tool to rid their workplaces of bias with the idea this will lead to a more equitable and hospitable environment for employees. Unfortunately, the numbers they are reporting are showing little change in the diversity makeup of their companies. Much of the training that was developed and used consisted of a short, one-hour or less video training focused primarily on awareness of implicit bias. Previous research has shown that awareness is an important part of behavioral change; however, my research showed it was not enough. Participants in the study were longing for more instruction and tools to help them mitigate implicit biases. In addition, my research showed that transformational conversation was a key component to motivate change and shift perspectives in participants. It was only through the interaction and conversation in the workshop that the concepts of others

having different perspectives became tangible to them. I would argue that without transformational conversation in the workshop, the participants are encountering only one perspective outside of their own – that of the lecturer.

My research further delved into the role of social identity as a motivator for change in implicit bias. My research showed that each individual could not be boiled down to one aspect of his/her social identity, such as race or gender. As a facilitator, you have to take into account the entire identity of the participant when thinking about how to motivate change in implicit bias.

In this research, I focused on creating a workshop that would move the needle on implicit bias in the workplace. I knew through experience how important the interaction and conversation were to implementing change, but I had not looked at it in a research setting. The fact that the research bore out my experiences reinforces my disdain for companies implementing diversity training only to check a box and not to affect change. Employing videos or training that does not include personal contact with other participants will not yield change. It will not truly engage the participant – the unidirectional nature of the course will not be effective. The change comes from a perspective shift and can be obtained through transformational conversation.

APPENDICES

Appendix A. Implicit Association Test (IAT)

Background on the measurement of implicit bias.

In the 1920s and 1930s, the first scientific studies of attitudes toward racial and ethnic groups were conducted. The method was simply asking questions and compiling the self-reported answers (Banaji & Greenwald, 2013, p. 30), and it was useful at that time because "early twentieth-century Americans apparently has no qualms about openly expressing their racial and ethnic attitudes" (Banaji & Greenwald, 2013, p. 32). However, as times began to change, and attitudes shifted towards diversity and equality, "there is now no doubt that impression management produces flawed, inaccurate responses to many questions that have long been used to measure race prejudice" (Banaji & Greenwald, 2013, p. 30). As a result, a more reliable and accurate measure of bias was needed.

This gap was identified by Anthony Greenwald in the early nineties and led to the first prototype of the IAT in 1994. The first computer program he built tested the time it took for a person to sort flowers and insects between two feeling words – pleasant and unpleasant. Greenwald hypothesized that we have a strong connection between flowers and words with a pleasant meaning and insects and words with an unpleasant meaning. Participants were asked to complete two short tests. One test went through the names of flowers and insects and asked the participant to sort between two categories: 1) flowers or pleasant words and 2) insects or unpleasant words. The second test changed the pairings: 1) flowers or unpleasant words and 2) insects or pleasant words. Depending on whether you have a preference for flowers and insects, your preferred sorting will take less time and have fewer errors (Banaji & Greenwald, 2013, pp. 36-37). The basic premise of the IAT is that we group things in our mind. We have associations

that are hard-wired in our brains because we have encountered them so many times throughout our lives. Banaji offers this example: "When you say bread, my mind will easily think butter but not something unrelated to it" – like shoe (Vedantam, 2017).

Banaji joined Greenwald in this research in 1995, and they "proposed that the study of implicit social cognition deserved new attention to understand core aspects of the mind: attitudes, stereotypes, and self-based cognition." They issued a call for the "development of new methods that could robustly access implicit social cognition" (Banaji, Bhaskar & Brownstein, 2015, p. 183). The IAT was one answer to their call. Banaji and Nosek, in collaboration with Greenwald, have continued to refine the original test to what is now available online at implicit.harvard.edu/implicit/ as part of Project Implicit.

Banaji and Greenwald say the IAT is effective because it "relies on the fact that your brain has stored years of past experiences that you cannot set aside when you do the IAT's sorting tasks" (2013, p. 39). This ties into the what psychologists call valence, or emotional value – the shared property "when categories can be linked to each other via shared goodness or badness" (Banaji & Greenwald, 2013, p. 39). Banaji and Greenwald link this to the concept in psychology of mental association, describing this association as "the mental glue that can allow two categories to combine into one" (2013, p. 39).

Contrarily, there are critics of some of the trending measurements of unconscious bias. Blanton and Jaccard dispute the effectiveness of some of the commonly accepted methods of measuring implicit/unconscious bias – specifically the Implicit Association Test. The authors reviewed the concept of unconscious racism and the empirical evidence presented in various articles on the subject and found,

…there is little evidence to support the more provocative claim: that people possess

unconscious racist attitudes. Many of the arguments to the contrary rest on strong

interpretations of response patterns on implicit attitude measures. Although advances in

implicit measurement can improve our understanding of racial bias, at present their use as

tools for rooting out unconscious racism is limited. (2008, p. 177)

Phil Tetlock from the University of Pennsylvania is another critic of the IAT: "There is a

question of whether or not people who score as prejudiced on the IAT actually act in

discriminatory ways toward other human beings in real-world situations. And if they don't, if

there is very close to zero relationship between those two things, what exactly is the IAT

measuring?" (Vedantam, 2017). This criticism offered some challenges: if the IAT is not a valid

measure of implicit bias, what value does it offer for research trying to measure change. At the

end of their article, Blanton and Jaccard (2008) offer ideas of how to develop "research programs

that might move these constructs to firmer scientific footing" and "urge caution" until such

research is done. Specifically, the authors call on future research to examine unconscious bias in

"real-world settings in which personal experiences, social norms, and accountability pressures

might override or interact with unconscious influences" (Blanton & Jaccard, 2008, p. 277).

Implicit Association Results

I believed that my research could help answer the question of whether the IAT is a good

measure of behavioral change. However, my findings were anomalous. All of my qualitative data

indicated that the participants had a change in implicit bias. On the IAT results, the D-scores

moved closer to zero for five out of the seven participants (indicating moving closer to

neutrality). However, for two participants, the D-score showed increased bias.

The D-Score is representative of a scale of a "slight," "moderate," or "strong" association with the tested item. For the study, I used the IAT for Family and Career. A D-Score of zero implies a neutral association. A negative score implies a stronger association between female with career and male with family. A positive score implies a stronger association between male and career and female with family.

For the workshop participants, I compared their IAT scores from before the workshop to their IAT scores after the workshop. All seven of the workshop participants had changes in their D-scores. For five of them, the D-score moved closer to zero, which would seem to suggest more neutrality in bias was achieved during the workshop. However, for two of the participants, their biases (as measured by the IAT) increased. I am not sure what to make of the results of the two anomalies. They could be outliers, or the IAT may not be a good measure of change for diversity workshops. Or perhaps the test I selected – the IAT for career and family – was not the right one to use. Whatever the cause, further investigation is needed to figure out if the IAT is a good measure or indicator of behavioral change in implicit bias.

Figure 5: Male & Female D-Scores Compared for Intervention Group

Male & Female IAT D-score comparison
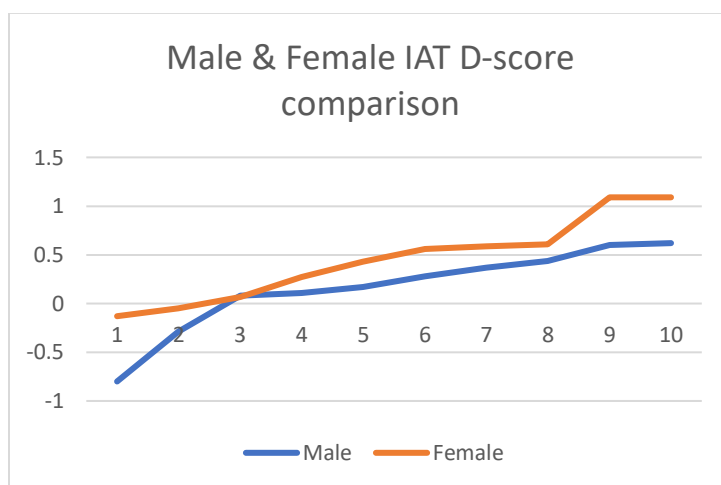
Figure 6: Workshop IAT D-Scores Before and After the Intervention
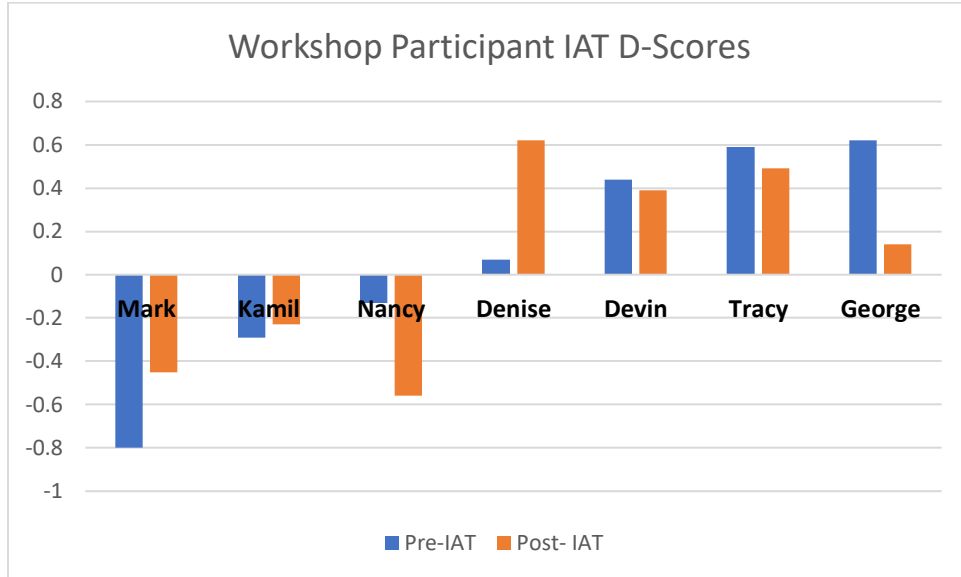
Appendix B. Control Group

The control group was primarily used as a comparison to see if my workshop sample was a fair representation of the IT population (i.e., they had similar responses to the interview questions). As such, I looked at the word frequency for the control group compared to the word frequency of the participant group.

Figure 7: Top 15 Word Count for Participant Group & Control Group

Participant Group Top 15

Word	Count
diverse	30
people	28
manager	26
inclusive	24
important	24
think	21
different	16
years	16
working	15
personally	15
environment	14
situation	11
contribute	11
creating	11
anything	11

Control Group Top 15

Word	Count
People	116
Different	85
Think	83
Diverse	74
Manager	55
Personally	48
Inclusive	35
Important	34
Questions	29
Thing	29
Workplace	22
Anything	21
Woman	20
Years	20
Cultures	19

From the results, the control group and the workshop group agree on ten of the top fifteen words in the word frequency query: diverse, people, manager, inclusive, important, think, different, years, personally and anything. Breaking down the word frequency by males and females participants yields the following results:

- Men in the control group and men in the workshop agreed on seven of the fifteen words;
- Women in the control group and women in the workshop agreed on seven of the fifteen words;
- Men in the control group and women in the control group agreed on nine of the fifteen words; and
- Men in the workshop group and women in the workshop group agreed on eight of the fifteen words.

Figure 8: Word Frequency Count by Gender & Participant vs. Control Group

Men Word Frequency Control		Men Word Frequency Workshop		Women Word Frequency Control		Women Word Frequency Workshop	
Word	Count	Word	Count	Word	Count	Word	Count
people	63	diverse	19	different	58	people	20
diverse	35	inclusive	15	think	56	think	17
personally	30	manager	14	people	53	important	17
manage	27	environment	11	diverse	39	manager	12
different	27	different	10	managing	28	diverse	11
think	27	people	8	woman	18	contribute	11
inclusive	20	creating	8	important	18	years	10
important	16	making	7	personally	18	situation	10
cultures	15	important	7	thing	16	working	9
questions	15	working	6	inclusive	15	included	9
based	14	business	6	question	14	inclusive	9
things	13	means	6	anything	12	personally	9
company	12	personally	6	years	11	anything	8
workplace	11	years	6	little	11	sometimes	8
interact	10	questions	5	workplace	11	opportunity	8

Because of the similarities in word frequency, I felt I had a relatively representative sample of the IT population in my workshop.

The IAT D-scores from the control group were not very informative on their own because I did not repeat the IAT tests for this group. However, the results did show that neither the range, median or average of this group (.42; .275; .38) was close to those of the participants (1.42; .07; .07). Again, this data did not seem very helpful in my study. More research should be done to figure out how to use the IAT D-scores as a measurement.

Figure 9: Control Group IAT D-Scores
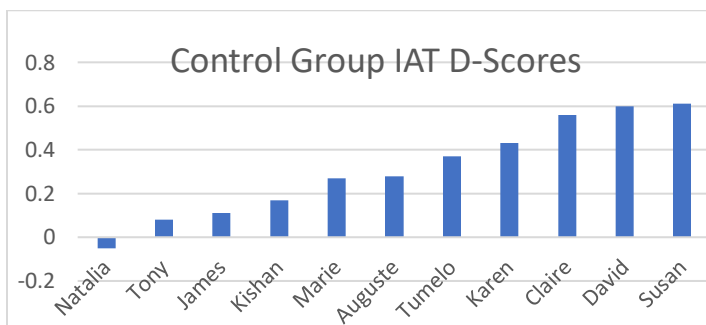
Appendix C: Pre and Post-Workshop Interview Comparison

For the post-workshop interviews, I did face-to-face interviews with the seven workshop participants after the workshop ended and recorded the audio and transcribed it. I asked the same questions as the pre-workshop interview with the addition of one question on the value of the conversation portion of the workshop. The purpose of the post-workshop interview was to assess change based on the answers of the participants in comparison to their answers given prior to the workshop. I looked at the node references for each to compare.

Figure 10: Pre-workshop Coded Nodes vs. Post-workshop Coded Nodes for Interviews

Pre-workshop interviews Coded Nodes

	Denise	Devin	Nancy	Mark	George	Tracy	Kamil
2 : Active Role	2	1	1	1	1	1	1
11 : comfortable	0	0	0	0	1	0	0
15 : D&I important	3	2	0	3	1	0	4
16 : Better experience	0	0	0	0	1	0	0
17 : Challenging	0	0	0	0	0	0	0
18 : Important to client	0	2	0	1	0	0	1
19 : Important to innovation	1	0	0	0	0	0	1
20 : Important to team	3	0	0	3	1	0	1
21 : Makes me better	0	0	0	0	0	0	1
22 : Strengthens problem solving	0	0	0	0	1	0	0
23 : Strong Output	0	1	0	0	1	0	1
24 : Definition of D&I	2	0	2	0	3	1	2
25 : Accepts	0	0	0	0	1	1	0
29 : Culture	0	0	0	0	0	1	0
30 : Different people	1	0	0	0	2	0	0
31 : Different perspectives	1	0	0	0	1	0	2
32 : Diverse	0	0	0	0	1	0	0
36 : Included	0	0	1	0	0	0	0
39 : Respects	0	0	1	0	0	1	0
40 : Variety	1	0	0	0	0	0	0
45 : Diversity as advantage	0	0	0	0	0	0	1
53 : Knowledge	0	0	0	0	0	0	1
55 : Man	0	1	0	0	0	0	0
56 : Minority	2	1	1	0	1	1	0
57 : No diversity focus	1	0	0	0	0	0	0
61 : Opportunity to contribute	0	0	2	0	0	0	1
62 : Peaceful	0	0	1	0	0	0	0
68 : Skill set only	2	0	0	1	0	0	0
74 : Treat equally	2	0	1	0	0	1	0
75 : Treated differently	0	1	0	0	0	1	0
81 : Woman	1	0	0	0	0	1	0
	22	9	10	9	16	9	17

Post-workshop interviews Coded Nodes

	Denise	Devin	Nancy	Mark	George	Tracy	Kamil
2 : Active Role	2	1	2	1	0	3	1
10 : Change example	0	0	0	0	0	0	2
11 : comfortable	0	0	0	0	1	0	0
14 : Conversation Interaction	2	3	2	4	2	1	4
15 : D&I important	3	2	1	2	0	2	3
18 : Important to client	0	0	0	2	0	0	0
19 : Important to innovation	0	0	0	0	0	0	1
20 : Important to team	1	2	1	2	0	2	0
21 : Makes me better	0	0	0	0	0	1	1
23 : Strong Output	2	0	1	1	0	0	1
24 : Definition of D&I	3	1	2	0	4	1	1
25 : Accepts	0	0	1	0	3	1	0
27 : celebrate difference	0	0	1	0	0	1	0
29 : Culture	0	0	1	0	0	0	1
30 : Different people	0	0	1	0	0	1	0
31 : Different perspectives	2	0	1	0	0	0	0
38 : Open Inclusive	0	1	1	0	3	0	0
40 : Variety	1	0	0	0	0	0	0
42 : Different solutions	2	0	0	0	0	0	0
43 : Disengaged	0	0	0	3	0	0	0
44 : Diverse background	1	1	0	0	0	0	0
46 : Diversity Broad	1	1	0	0	0	0	0
61 : Opportunity to contribute	0	0	1	0	0	0	0
68 : Skill set only	0	0	0	1	0	0	0
71 : Support Role	0	0	0	1	1	0	0
74 : Treat equally	0	0	0	2	0	0	0
75 : Treated differently	0	2	1	0	0	0	0
76 : Using tools	0	0	0	0	0	2	0
79 : validation	0	0	0	0	1	0	0
80 : Values	0	2	0	0	0	0	0
	20	16	17	19	15	15	15

In comparing the pre-workshop interviews and the post-workshop interviews of the seven participants, I compared the nodes for each set to see what themes were consistent across the two and what themes debuted in the post interview. Comparing the two sets of interviews (pre and post), seventeen of the nodes coded appeared in both. Overall coding increased from 92

references to 117. Some of the themes from the pre-workshop interview disappeared, such as "diversity being an advantage" and "people talking about themselves as a minority." The notable theme additions in the post-workshop interviews include references to the importance of the conversation and interaction to the workshop and the need to be open and inclusive. Overall, this data served as a guide for themes when I was analyzing the interviews.

Appendix D: Case Studies of Participants

I analyzed each of the seven participants in the workshop as individual case studies. For each one I had eight pieces of coded data: 1) pre-workshop interview; 2) diary reflection one; 3) transcript from the conversation on implicit bias with a partner; 4) diary reflection two; 5) written plan for change; 6) transcript from conversation on plan; 7) diary reflection three; and 8) post-workshop interview. I looked at the frequency of the top-coded nodes for all of the data collected on the workshop participants using matrix coding. This gave me some insight into some of the similarities in topics across the data for each, but it did not give a picture as to how these themes evolved over the course of the workshop.

Figure 11: Top Node Frequency by Workshop Participants

Top Node Frequency by Workshop Participants

	Active Role	Conversation Interaction	Using tools	Awareness	D&I important to team	D&I Definition/Different perspectives	Engaging in conversation	Minority	System 1 & 2	Woman
Denise	13	4	11	3	4	3	5	6	4	5
Devin	9	3	11	7	2	0	0	2	4	2
Nancy	11	4	10	5	1	1	0	2	5	2
Mark	5	5	16	2	5	0	5	3	2	2
George	7	5	15	5	1	1	12	1	7	2
Tracy	8	13	15	2	2	0	12	2	4	1
Kamil	7	10	10	2	1	4	12	0	3	2

So, the next logical step was to analyze all the data coded to each participant as a case study and look for moments of impact, transformation or change.

To better understand the content of the plans and the plan conversations, I ran a word frequency query. But again, this did not prove very insightful.

Figure 12: Word Cloud for Plans & Plan Conversations for Participants

The results for the word frequency query on the conversations themselves did not seem very revealing. The top ten words were think, people, manager, different, years, first, learn, feedback, colleagues and cultures. Many of the same words appeared that were in the reflections: think, people, different, learn and feedback. But as I drilled down deeper into the top three words, think, people, manager, I found these were used in more of a filler context than in a meaningful way.

Figure 13: Word Cloud for Transformational Conversations

"Think, thinking or thinks" was used by all the participants in the conversations.

Examples include:

Denise: "So this was kind of hard for me because I couldn't think of an example, but then I started thinking about trying to think, okay, places I've been where I've experienced this."

Nancy: "So, I think we had a manager who's not with us any longer, and I think when he was involved with our group."

Devin: "In fact, I think they started implementing programs on unconscious bias, to make sure."

George: "Because he thinks, 'this is a client or whatever.'"

I found similar results for the word "people." Although "people" was often used in the conversations, this could be expected because of the nature of the inquiry into implicit bias and the need for interaction with people to experience implicit bias.

Tracy: "Um, I generally have a bias against asking people that appear to be foreign about their heritage."

Kamil: "So when people ask me, because they get confused and say, 'Where, where?'"

The other results were similar to these examples.

"Manager" showed up in the query mainly based on the conversation between Nancy and Devin, where it came up nine times, as opposed to four in the conversation with Denise and Mark and two times in the conversation with Tracy, George and Kamil. Nancy was referencing a former manager in her example, so the word came up frequently:

Nancy: "I feel sometimes managers now have a lot more responsibility but less authority.

As a manager, you can sometimes push people."

Consequently, the word frequency search in the conversation transcripts did not return a lot of valuable information for analysis.

To determine if the modules hit the targeted learning objective, I did a word frequency query across all participants for each diary reflection. With this, I determined the top ten words used by participants and looked for emerging themes. I then further narrowed my focus to the top three words for each query and looked at the word context to compare the participants.

Figure 14: Top 10 Words Used in Reflections

Reflection 1	Reflection 2	Reflection 3
aware	assumptions	Learned
system	feedback	Implicit
others	system	differently
different	conclusions	anything
thinking	experience	Based
unconscious	ladder	Impact
biases	situation	Aware
mitigate	thinking	Action
recognizing	action	thought
action	discussion	Biases

Appendix E: NVivo Coding

I created my initial nodes by coding the nineteen pre-workshop interviews (seven with participants and twelve for the control group). Throughout the coding, I was refining my nodes and combining nodes to tease out the themes in the text. By the end of the coding of the pre-workshop interviews, I had forty-seven unique nodes. I added thirty-four additional nodes as I coded the post-workshop interviews, the diary reflections, the implicit bias partner conversations and the plan development conversations for a total of eighty-one nodes. Each participant in the workshop was coded as a separate case, and I assigned demographic information to each for comparison purposes.

Across all the data collected, the top referenced nodes were Active Role, Using tools, Conversation interaction, D&I important to the team, Awareness, Minority, Woman, Using tools/ System 1 and 2, Definition of D&I/Different perspectives, Engaging in conversation, Treated differently, Treated equally, Definition of D&I/Different people, Assumptions and Definition of D&I/Culture. After analyzing this data, the top three nodes can be viewed as the top themes emerging from across the study. The top node referenced was Active Role, which was defined as an action that showed the person taking an active role with diversity and inclusion. Using tools was the second most used node and was defined by using tools to help mitigate bias – System 1 and System 2 Thinking, Ladder of Inference, List of cognitive bias, and the Feedback Loop. Conversation interaction was used as a node for any reference to the conversation and interaction used in the workshop. Using tools only came up after the first and second modules of the workshop when I introduced the tools to the participants. And the conversation and interaction were introduced in the second module. So the language of the participants and level of planned engagement in diversity and inclusion evolved with participation in the workshop.

Figure 15: Top 15 Nodes Referenced in the Data

Nodes\\Active Role   62

Nodes\\Using tools   39

Nodes\\Conversation Interaction   38

Nodes\\D&I important\Important to team   23

Nodes\\Awareness   22

Nodes\\Minority   21

Nodes\\Woman   20

Nodes\\Using tools\System 1 & 2   18

Nodes\\Definition of D&I\Different perspectives   17

Nodes\\Engaging in conversation   17

Nodes\\Treated differently   17

Nodes\\Treat equally   16

Nodes\\Definition of D&I\Different people   15

Nodes\\Assumptions   14

Nodes\\Definition of D&I\Culture   14

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In her 20 years with IBM, Kim worked as a software engineer, accessibility advocate, technical writer, senior editor, senior communications manager and diversity leader. Kim spent 12 years in various global corporate communication roles in IBM and worked in executive, workforce, global delivery and HR communications.

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