The Go/No Go Association Task as a New Technology for Teaching Anti-Prejudice

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Implicit measures of association have allowed researchers to study implicit prejudice based on the degree of association between representations of groups that are the target of prejudice and negative versus positive attributes. These implicit prejudice measures show that people find it more difficult to respond to a representation of the group (e.g., photo of an Aboriginal Australian) and a positive attribute (e.g., "HAPPY") using the same key than to the same representation of the group and a negative attribute (e.g., "SILLY"). Using measures of implicit association as a technology for teaching anti-prejudice is highly useful because it allows people to experience their own implicit biases. Thus, this technology makes prejudice a personally relevant issue (i.e., not something that other people possess) and, consequently, facilitates the engagement with this topic that is so essential to prejudice reduction.

Keywords: Implicit prejudice, anti-prejudice, prejudice reduction, Go/No Go Association Task

Setting the stage for teaching anti-prejudice in Australia

There are three primary reasons to include anti-prejudice teaching as a central topic of higher education courses, particularly those which produce educators, community and health service providers, or human service workers. First, discrimination on the basis of age, disability, race, and sex is illegal in Australia (e.g., Australian Human Rights Commission, 2007). There are also many other characteristics (e.g., religious belief, sexual orientation) which are protected under the Equal Opportunity Act; State Government of Victoria, 2010). These laws play an important role in the positions and activities of individuals working in a range of jobs which serve the community (e.g., nurses, teachers, lawyers, and psychologists). Second, prejudice has a known significant negative effect on the health and wellbeing of those who are the targets of prejudice (e.g., Paradies, 2006; VicHealth, 2007) and an, as yet, largely unexplored consequences for the prejudiced individual (Page-Gould, 2010). Estimates suggest that more than one quarter of (27%) Australians are directly affected by prejudice or discrimination (e.g., Dunn, Forrest, & Burnley, 2011); however, the indirect impact is potentially inestimable. There is agreement among researchers and policy makers that racism is becoming a key issue in modern Australia due to increasing multiculturalism (e.g., Australian Federal Government, 2011; Pedersen, Walker, Paradies, & Guerin, 2011). Furthermore, if one also considers other prejudices (e.g., ageism, homophobia), it is likely that many Australians will experience prejudice and discrimination, and the effects of these on their health and well-being (e.g., Barrett, Lewis, & Dwyer, 2011; Kendig & Browning, 2011). Finally, prejudice has several substantial negative consequences for universities including poorer student learning (e.g., Steele, 1997) and experiences (e.g., Graycar, 2010; Mullins, Quintrell, & Hancock, 1995; Schram & Lauver, 1988) and devaluing of the Australian university "product" to international students who cite personal safety as the most important reason for choosing an Australian university over other English-speaking universities (Marginson, 2010). Thus, the inclusion of anti-prejudice teaching in higher education courses would make it possible to ensure that graduates have greater awareness of the issues and consequences of prejudice. Furthermore, if this awareness is managed well, these graduates would not only have greater knowledge, but also less anxiety about intergroup relations which has been found to be associated with prejudice reduction (Pettigrew & Tropp, 2008). As a result, these graduates would be capable of undertaking an educated discussion on anti-prejudice and leading by example to shape the future of Australia on this important social issue.

This paper explores contemporary definitions and issues of prejudice, and reviews current literature on ant-prejudice teaching before presenting a new technology for teaching anti-prejudice, called the Go/No Go Association Task (GNAT; Nosek, & Banaji, 2001). The strengths and weaknesses of GNAT for anti-prejudice teaching, and an example on how to implement this technology are also provided. In so doing this paper to identifies the potential for social change through higher education. Finally, this paper highlights the role of learning in the present to create a better and less prejudiced future, and emphasises the role of teachers as creators of that future.

Explicit prejudice

Prejudice is commonly defined in psychology (as opposed to in law) as "an unfair negative attitude toward a

social group or a person perceived to be a member of that group" (Dovidio, 2001, p.829). This definition encompasses older (e.g., traditional and blatant prejudice; Gilbert, 1951) and newer forms of prejudice (e.g., modern racism; McConahay, 1986) which can be simplistically characterised by the variation in the degree to which prejudiced people freely express or admit their prejudiced views. For example, blatant forms of prejudice involve the explicit expression of negative attitudes toward groups or individuals (e.g., "Aboriginal Australians are less intelligent than white Australians"; Pedersen & Walker, 1997) whereas modern prejudice includes the expression of negative attitude towards a groups which are contextualized or qualified (e.g., "I'm not racist, but,…..") or accompanied by justification (e.g., the criticism of Aboriginal Australians as being lazy because this group experiences a documented higher level of unemployment; Australian Bureau of Statistics, ABS, 2010) or normative agreement (e.g., "everyone agrees that…..").

It has been argued that modern prejudice has changed to be aligned with contemporary values and laws (e.g., anti-discrimination; Pedersen, Griffiths, Contos, Bishop, & Walker, 2000). Researchers argue that the expression of prejudice has decreased consistent with modern values and laws that promote equality and anti-prejudice, but the prejudice itself has not decreased, its expression finding increasingly subtle and insidious forms. Support for this contention can be seen in the substantial reduction in overt expressions of prejudice during the 1990s (Banaji & Greenwald, 1994), which bore no relationship with documented levels of discriminatory behaviours (e.g., aggression, helping behaviours and nonverbal communication; Schuman, Steeh, Bobo, & Krysan, 1997). These findings suggest that people were able and willing to manage their views to limit explicit expressions of prejudice, but that there was no noticeable change in prejudice and discrimination beyond the laboratory. Furthermore, a shift in research to the use of modern measures which allow people to express prejudiced views in defensible or normative ways has revealed that prejudice was still very much present (e.g., *they* are demanding too much from the rest of society; McConahay, 1986).

Implicit prejudice

Implicit prejudice is a relatively new topic of study. Implicit prejudice can be defined as the implicit negative evaluation of social group, or member of that group, on the basis of their membership. As a result, implicit prejudice cannot be directly observed by their possessor unless they are deliberately measured, thus, resulting in a more useful definition of this construct as the stronger implicit association between negative and an outgroup compared to positive (e.g., Banaji & Greenwald, 1995; Son Hing, Chung-Yan, Hamilton, & Zanna, 2008).

Different implicit measures achieve the assessment of this implicit prejudice differently. For example, implicit measures of association assess implicit prejudice using a target compatibility paradigm which uses the speed or accuracy with which a person can respond to representations of a group (e.g., photo of a Aboriginal Australian) and a positive attributes (e.g., "HAPPY") or negative attributes (e.g., "SILLY") using the same key as the measure. Thus, if Aboriginal Australian is more compatible with positive attributes responding to these two types of stimuli will be faster or more accurate. This pattern of responding is interpreted as evidence of positive implicit associations. However, if the negative implicit association is stronger, this is interpreted as evidence of implicit racism towards Aboriginal Australians. Another implicit measure of prejudice is based on the use of priming paradigms. Priming implicit procedures assess implicit prejudice as the increased speed of identification of a target when preceded by a related prime (e.g., Wittenbrink, Judd, & Park, 1997). For example, implicit racism would be indicated by the significantly faster accurate identification of words such as "AWFUL" or "HATE" as real words (e.g., a simple lexical decision) compared to words such as "SMILE" or "LIKE", following the subliminal presentation of a photo of an Aboriginal Australian. What makes these two measures tools for assessing "implicit" prejudice is not that the task itself is implicit. Rather, these are said to measure implicit prejudice because the prejudiced that is being measured is never explicitly expressed or endorsed by the person completing the measure. Thus, it is possible for individuals to express anti-prejudice, but still to demonstrate implicit prejudice which is both a strength of implicit measures (i.e., they are less prone to faking; Steffens, 2004) and a source of considerable controversy (e.g., Arkes & Tetlock, 2004).

The most well studied implicit prejudice is implicit racism (e.g., McConnell & Liebold, 2001; Son Hing, et al., 2008), although research has been undertaken to explore other prejudices including sexism, homophobia, and ageism (e.g., Banaji & Greenwald, 1995; Banse, Seise, & Zerbes, 2001; Cesario, Plaks, & Higgins, 2006). Generally, research exploring implicit prejudices has found that the majority of individuals demonstrate implicit prejudice, and that implicit prejudice rarely correlates with explicit prejudice (e.g., Nosek, 2007). However, implicit prejudice have been found to be uniquely related to automatic behaviours (e.g., Latof & Vaes, 2012; McConnell & Liebold, 2001; Ziegert & Hanges, 2005), contributing beyond explicit prejudice to the prediction of observed behaviour.

Teaching anti-prejudice for prejudice reduction

The teaching anti-prejudice occurs in many universities in Australian and internationally. For example, stereotypes, prejudice, and discrimination are widely taught topics in undergraduate social psychology units, and all accredited psychology programs taught in Australia require the topics of intercultural diversity and indigenous psychology to be taught (Australian Psychology Accreditation Council, 2010). However, the efficacy of such programs to reduce prejudice is rarely assessed. The few studies which have explored the efficacy of anti-prejudice programs, including diversity programs, suggest there is limited empirical evidence for that these programs do, in fact, reduce prejudice, although there is some evidence for their effectiveness in increasing awareness of prejudice and even white privilege.

Psychological research has found inconsistent results for the efficacy of anti-prejudice programs as tools for prejudice reduction. For example, one study found that the completion of a unit in which diversity or prejudice was a topic of study did have a positive effect on the perceptions of minority students compared to student who had not commenced or completed such units (Hogan & Mallot, 2005). However, these findings also revealed that components of prejudice were differentially affected by the completion of this unit. Specifically, while students reported lower levels of denial (e.g., discrimination is a problem of the past), no persistent effect was found for resistance to intergroup contact or intergroup antagonism (Hogan & Mallot, 2005). Another study using a pre- and post-test design to explore the effectiveness of a 15 week unit on the psychology of race and gender including prejudice and racism found that, while student's support for affirmative action and awareness of white privilege increased following the unit, prejudice towards various racial groups was either unchanged or increased (Case, 2007).

Finally, the teaching of diversity topics in psychology has been found to have no positive effect on the teachers of these topics (Boysen, 2011). Specifically, a survey of psychology educators revealed that the multicultural awareness required to manage the sensitive teaching of these issues were a property of individuals, and were not acquired via the teaching of these unit.

Taken together, the findings of studies examining the effects of anti-prejudice teaching in psychology units is not particularly consistent with the overwhelming conclusion that these units do not lead to reduced prejudice for students or increased multicultural awareness for staff. In effect, these units are not a good approach to teaching anti-prejudice for prejudice reduction.

There are fields beyond psychology which have embraced teaching of anti-prejudice for prejudice reduction. For example, there is a growing literature in the field of nursing which suggest nursing educators are introducing programs including elements either anti-racist or a multicultural approaches (e.g., Nairn, Hardy, Parumal, & Williams, 2004). However, while these issues are of considerable interest to nursing educators, the most recent literature reveals a focus on educators approach and conceptualisation of the issues rather than on the efficacy of the enterprise (e.g., Nairn, Hardy, Harling, Parumal, & Narayanasamy, 2011). Plausibly, where these programs are similar to psychology programs (e.g., lectures and tutorials on topics of race, gender etc.), they will also be plagued by limited prejudice reduction.

New approaches to overcome limited efficacy of anti-prejudice teaching

In their recent review of approaches to teaching anti-prejudice, Pedersen and colleagues (2011) described 14 mechanisms for reducing prejudice which might enhance the efficacy of traditional approaches. The first of these approaches resembles the traditional approach of introducing students to new information about minority groups, however, their approach emphasises dialogue rather than instruction with the dispelling of fallacies and myths the main aim of this approach. In fact, it is this difference in emphasis that characterises each of the proposed mechanism which essentially attempts to place the student in control of their learning by way of largely self-motivated, respectful discussion of the issues of prejudice and discrimination. This approach addresses one of the main impediments to anti-prejudice reduction, namely, students' failure to engage with anti-prejudice information in a way that facilitates personal change and, thus, reduces their prejudice. However, many of the mechanisms discussed may be difficult in a classroom setting because of the highly personal nature (e.g., freely expressing and discussing fallacious beliefs about racial groups or notions of white privilege) or because class sizes would make such discussion difficult to manage, especially under the guidance of less expert tutors.

Adams, Edkins, Lacka, Pickett, and Cheryan (2008) present a simple alternative to the traditional approach to anti-prejudice teaching by adopting a systemic, rather than personal focus in a tutorial on stereotypes, prejudice,

and discrimination. This approach begins by demonstrating an implicit racism measure, and then discussing individual, institutional and systemic sources of stereotypes, prejudice, and discrimination. Using this approach, Adams and colleagues found that students who completed the systemic tutorial demonstrated greater awareness of systemic racism and were more supportive of antiracism policies than students in the personal focus (i.e., traditional) tutorial, or those who did not complete a tutorial on the topic. In contrast to Pedersen and colleagues (2011) mechanisms, it seems likely that Adams and colleagues approach facilitated engagement with the topic by reducing personal responsibility and, as a consequence, potentially limiting personal prejudice reduction.

Together, the new approaches highlight the positive consequences of both engaging individual and reducing personal responsibility in anti-prejudice teaching for prejudice reduction. However, these approaches have not been used in conjunction. Furthermore, the strengths and weaknesses of these approaches make them differentially useful in the tertiary teaching environments. As a result, I happily accept Pedersen and colleagues (2011) conclusion that "one discipline does not have all the answers" (p. 46), and willingly offer one further approach to anti-prejudice teaching for prejudice reduction.

The GNAT as a New Technology for Teaching Anti-Prejudice

The GNAT

The Go/No Go Association Task (GNAT; Nosek & Banaji, 2001) is a stimulus compatibility, shared response method which measures implicit associations between a single target category (i.e., FRUIT) and a single attribute (i.e., GOOD) by assigning both targets to a single response (i.e., "go"). As a result, participants sort targets, to which they make a response, from distracters (e.g., a second category and attribute) to which they make no response. Consequently, the GNAT is simple, transparent once explained, and robust to method effects making it one of the best solution to several key issues in implicit measurement (e.g., De Houwer, Teige-Mocigemba, Spruyt, & Moors, 2009).

The GNAT is capable of measuring implicit prejudice (described previously) as the differential negative versus positive implicit evaluation of racial group (e.g., Aboriginal Australian). Thus, to measure implicit racism towards Aboriginal Australians, participants would be asked to respond to pictures or words that are presented very quickly on a computer screen that belong to either a category (e.g., Aboriginal Australian) or an attribute (e.g., pleasant) using the spacebar (see Figure 1). They would be asked to make no response to pictures or words that belong to any other category (e.g., Caucasian) or attribute (e.g., unpleasant), which would disappear after approximately 750 ms. The accuracy with which this task is performed is then compared to the performance for a block where the participants respond to the category (e.g., Aboriginal Australian) and the opposite attribute (e.g., unpleasant). Greater accuracy, as previously stated, is interpreted as greater stimulus compatibility and, in the case where performance for the category and negative pairing is better than the category and positive pairing, implicit prejudice.

Aboriginal – Pleasant block
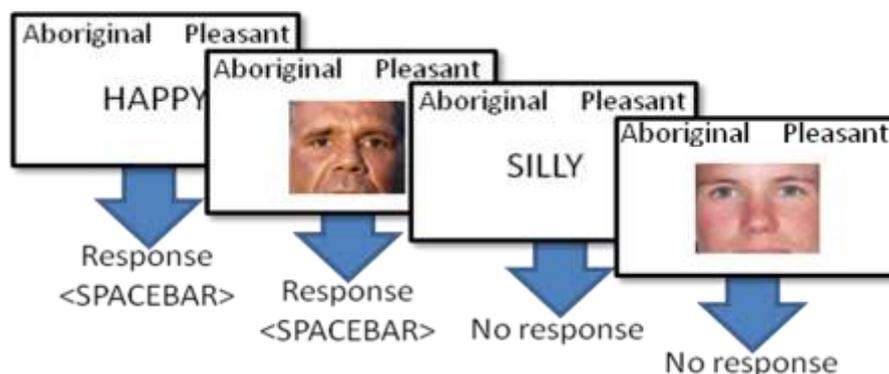
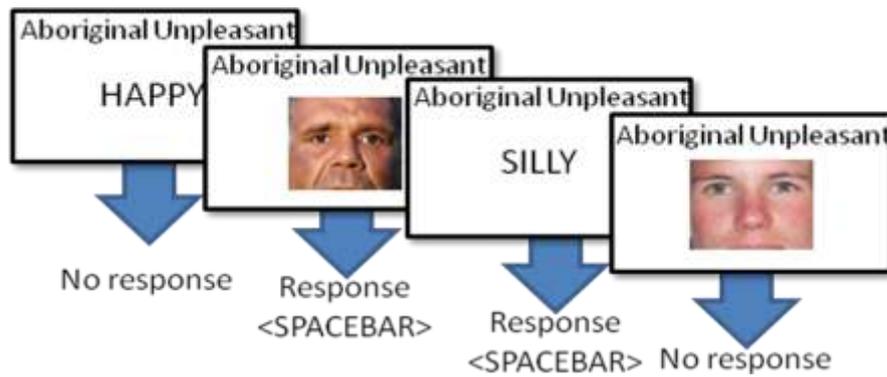**_Aboriginal – Unpleasant block_**

Figure 1: Screenshots of four trials with correct responses in the two implicit racism GNAT blocks

At the conclusion of the two-block (i.e., positive and negative evaluations) GNAT, participants can be provided with a summary of their performance. Specifically, they can be given feedback on their accuracy for each block, either a difference score comparing the accuracy for each block, or an overall summary for each block based on their performance (see Figure 2). This allows instructors to tailor the level of feedback to more or less knowledgeable participants.

Figure 2: Screenshots of three alternative forms of feedback

Following feedback, participants can also be given generic interpretation information to assist them to interpret their results (see Figure 3). This information has the potential to ameliorate the negative experience of receiving information which is likely to be at odds with the desired outcome (e.g., demonstrating no prejudice, regardless of actual levels of prejudice) by explaining that most people have implicit biases.
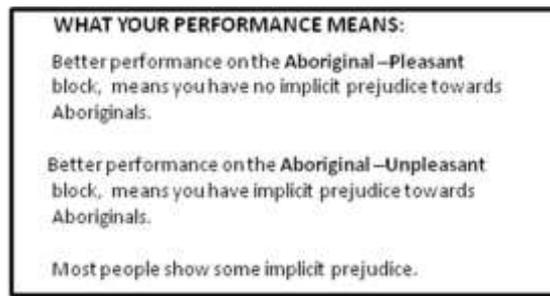
WHAT YOUR PERFORMANCE MEANS:

Better performance on the Aboriginal – Pleasant block, means you have no implicit prejudice towards Aboriginals.

Better performance on the Aboriginal – Unpleasant block, means you have implicit prejudice towards Aboriginals.

Most people show some implicit prejudice.

Figure 2: Screenshots of interpretation information

Using the GNAT as a technology for anti-prejudice teaching

The GNAT may be used as an approach to anti-prejudice teaching by having students complete a race-based GNAT in class, if a computer laboratory is available, or in their own time. It should be noted that there are benefits to having students complete the GNAT in the tutorial context. Specifically, they will all receive feedback at the same time which may strengthen the normative effect (i.e., most students will perform better on negative compared to positive blocks). However, some students may find this experience confronting which highlights the benefit of allowing students to complete the GNAT in their own time. The drawback of this option is that, if they receive feedback that they have demonstrated implicit prejudice, they may feel uncomfortable or angry and will have to wait until their tutorial to be guided through this experience.

Once students have completed the GNAT and received their feedback, they will have several personally relevant experiences to reflect on and share in relation to prejudice. First, they will have their feedback, and the feedback that it is typical for people to demonstrate some implicit prejudice. In addition, they will have the palpable experience of the difficulty of pairing positive words with an out-group (Greenwald, Nosek, & Sriram, 2006). This is, in fact, one of the greatest strengths of measures of implicit association compared to other measures (e.g., priming where participants do not experience the relationship between the race and attribute because of the use of subliminal primes). In this way measure of implicit associations such as the GNAT create a window allowing student to observe thoughts and feelings that we cannot typically access. Moreover, these thoughts and feelings are physically experienced as a inability to act in the ways that would be explicitly chosen (i.e., responding as quickly and effortlessly to Aboriginal Australian faces and positive words using a single key as we do to Australian faces and negative words). Thus, the GNAT is ideal for the teaching of anti-prejudice because this is an experience that cannot be externalised or denied. Rather, this information comes from within the participant, overcoming the issue of denial (i.e., I am not prejudiced) which has been argued to be the first step in addressing racism (Babacan, 2008).

Some of the benefits of the GNAT as an approach to anti-prejudice teaching include the opportunity to broaden the discussion to include a more comprehensive and contemporary definition of prejudice (e.g., Son Hing et al., 2008) which includes implicit prejudice. Moreover, the experience of the GNAT provides a basis for understanding the distinction between implicit and explicit prejudice, and their unique consequences. Furthermore, the GNAT is a reliable and flexible measure of implicit associations including implicit biases (Williams & Kaufmann, 2012). As a result, this approach can be used to teach a range of anti-prejudice topics from anti-racism to anti-ageism, anti-homophobia, and even anti-religion. Further advantages of this approach, at least currently, is that is it novel and, therefore, interesting. It is administered online and takes approximately five minutes to complete, and it is both compelling (i.e., because of the palpable encounter with one's own "unconscious") and engaging.

A race-GNAT tutorial for anti-prejudice teaching

I have used the race-GNAT for teaching implicit prejudice toward Aboriginal Australians and other racial groups (e.g., people from Asia or the Middle East) for the last three years. Both tutors and I have lead these computer-laboratory based tutorials which involve the completion of at least one race-GNAT and a structured discussion and I have found that these classes are routinely among the most animated I have experienced. I begin by having students complete the race-GNAT and provide them with accuracy feedback on their performance (e.g., the first alternative presented in Figure 2) and information on interpretation (e.g., Figure 3). I do not ask students to openly report their performance report to the class, but ask all to sit quietly until all students are finished. I then begin the semi-structured discussion: Question 1 – Can you think of any methodological factors that might have affected your performance?; Question 2 – Can you think of any

contextual factors that might have affected your performance?; Question 3 – Can you think of any personal factors that might have affected your performance?; Question 4 – Do you believe the feedback you received about your implicit prejudice?; Question 5 – Did you feel one block was harder than another block, and if so, why do you think this is? Finally, the discussion concludes with the presentation of the Son Hing and colleagues (2008) two-dimensional model of prejudice and a discussion of why it is important to understand both implicit and explicit prejudice (e.g., presentation biases, personal and systemic sources of prejudice, automatic and controlled behaviours). These discussions take on a life of their own and to date, I have yet to have one of these classes conclude before the end of the scheduled class time and am frequently approached by students after class who have questions or comments about the topic.

Conclusions

It was the aim of this paper to explore contemporary definitions and issues in prejudice, and teaching anti-prejudice, and introduce the GNAT as a new technology for teaching anti-prejudice. In addition, I have provided some guidelines and alternative for the implementation of the GNAT in computer-based tutorial classes. However, it is a limitation of this paper that I have only anecdotal evidence to present in favour the GNAT as a new technology for teaching anti-prejudice. This limitation is yet to be addressed, but is an important next step for this research.

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