Statement of Research Interests

Although people have the palpable feeling that they can accurately introspect about their beliefs and actions, this feeling is often incorrect. This general expectation is clearly illustrated by research in implicit social cognition—the study of how and when thoughts and feelings outside of conscious control or awareness influence beliefs, judgments, and actions. For example, I have found that although individuals may intend to act fairly – by judging a job applicant fairly (Lindner, Nosek, & Graser, 2012) or extending Constitutional protection to unpopular speech regardless of its content (Lindner & Nosek, 2009) – their judgments and behavior can be swayed by unintended or unwanted biases.

My research focuses on two central concerns in social cognition: (1) how, why, and when implicit biases or processes influence judgments and behavior across situations and (2) the structure and measurement of implicit and explicit social cognitions. Currently, my research has investigated these questions while expanding the boundaries of social psychology; I have specifically focused on two applied areas where research is lacking: (a) how age identity and preferences function and (b) how belief systems like religious and political ideology interact with or influence implicit biases. Social psychological research on these topics is surprisingly scarce, given their importance in people’s everyday lives. The lack of social cognitive research on aging is particularly surprising given the impermanence of a young age identity – aging is inevitable, and most people hope to live long enough to become an “older adult”.

Aging – Attitudes and Identity

I view age identity and preferences as a domain that can refine social psychology’s understanding of how group identity and intergroup attitudes work. Age differs from other social groups (e.g., gender, race, ethnicity) because age group membership is impermanent and because the definitions of “old” and “young” can vary considerably, especially relative to one’s own age. Age attitudes are an outlier compared to other social groups, as illustrated by my findings from a large-scale summary of six years of data collection at Project Implicit (Nosek et al., 2007). Compared to other social groups, implicit age attitudes demonstrated (a) the strongest preference for the dominant group, (b) one of the weakest associations with self-reported attitudes ever observed, and (c) no effects of group membership – both young and older adults expressed equally strong implicit liking for young compared to old people. My primary line of research extends social psychology’s abiding interest in stereotyping and prejudice to understand these findings. As such, I have investigated (a) the construct and predictive validity of implicit and explicit age attitudes and (b) how age biases spill over into behavior and discrimination, particularly in real-world contexts like employment.

Structure and construct validity of implicit age attitudes. My dissertation focused on the construct validity of implicit age attitudes. The minimal correlation between implicit and explicit age attitudes is surprising because the current understanding of implicit and explicit attitudes toward social groups is that they are distinct but related constructs. Thus, I examined whether implicit and explicit age attitudes are simply measuring different constructs, such that individuals can self-report any feelings toward old age and aging that predict meaningful variation in implicit age attitudes. Based on hypothesized explanations for negativity toward older adults, I assessed a wide variety of age-related self-report constructs (e.g., multiple measures of age-group preferences, age identity, intergroup contact, expectations about one’s own aging process, concerns about mortality and ill-health, positive stereotypes about older adults, and the perceived likability and competence of younger and older people). However,
implicit age attitudes, as assessed with four different measures, remained dissociated from anything that individuals reported. In this and other research, implicit age attitudes remain substantially dissociated from anything people have self-reported. Based on the diversity of self-report measures that I have tested, I lean toward concluding that implicit age attitudes are dissociated from anything people can self-report.

Given this persistent dissociation, I have also examined whether implicit attitudes favor the young so strongly because old and young are typically represented by the extremes of the age continuum – as very young and very old people. In three dissertation experiments, I manipulated which age group (as children, young adults, middle-aged adults, or old adults) represented younger people and older people for two different measures of implicit attitudes (Lindner & Nosek, 2012). I found that implicit age-group attitudes were: (a) sensitive to which age groups represented younger and older; (b) on average, universally favorable towards younger relative to older people, whether younger was represented by children or middle-aged adults; (c) largely dissociated from self-reported age-group attitudes; and (d) moderated by participants’ own age only when middle-aged adults represented younger people or older people.

This final finding is particularly notable because it, unlike previous research, aligns with predictions from social identity theories. These theories anticipate that individuals derive self-esteem from identifying with their groups, even low-status groups, and prefer their own ingroup to other groups. This new approach – varying which age-groups are compared – represents an important measurement innovation; it appears to have highlighted the age progression and allowed participants to identify their placement in that age progression. This measurement approach may also be relevant to understanding attitudes toward other social identities that represent a continuum, such as skin tone.

**Discrimination.** I am also interested in understanding when and how biases are expressed as discrimination. With Brian Nosek and Alex Graser (2009; under review), I conducted research contrasting two interventions that are intended to reduce hiring discrimination. I altered both the decision-makers’ environment – with the presence or absence of nondiscrimination statutes – and their sense of personal objectivity. I found that the presence of nondiscrimination statutes increased enthusiasm for both young and old job applicants. However, neither intervention reduced age discrimination, as greater favorability toward younger applicants relative to their equally-qualified older counterparts. Instead, individuals’ perceptions of their decision’s objectivity and reliance on normative criteria increased. These and other results highlight the difficulty that decision-makers experience in implementing equal-opportunity legislation; this suggests that anti-discrimination interventions that rely on decision-makers’ intentions to behave equitably may be ineffective.

Given the dissociation between implicit and explicit age attitudes, I am also interested in whether implicit and explicit age attitudes can uniquely predict discriminatory behavior toward older adults. The current understanding is that both implicit and explicit attitudes influence individuals’ behavior. Meta-analytic evidence finds that implicit attitudes are better predictors of discrimination in socially-sensitive domains like race, but age discrimination has not been directly examined. As an extension of my dissertation research, I am collaborating with several others to develop a flexible new paradigm that can reliably and effectively assess individuals’ willingness to discriminate in a variety of real-world contexts. I plan to examine how several young and old job applicants are evaluated, relative to their objective job qualifications, and whether implicit age-group attitudes predict age discrimination. Depending on the results, I also
hope to examine the influence of gender on age discrimination.

Drawing from my current research on age, I plan to conduct future research that examines how implicit biases influence real-world decisions and behavior. More generally, research on implicit social cognition highlights the power of individuals’ unawareness of their own biases and the difficulty of making unbiased decisions, suggesting that equal-opportunity legislation may fail to achieve its stated purpose. Given the ongoing debate about what implicit attitudes actually are, it is particularly critical to establish how self-reported and implicit attitudes uniquely influence how individuals are perceived and evaluated.

**Implicit Biases as National Indicators**

In collaboration with Project Implicit researchers around the world, I have contributed to research evaluating whether implicit attitudes and stereotypes can serve as national-level indicators of behavior or overall evaluations toward social groups. In my dissertation research, I used mixed modeling and multiple regression to investigate the predictive validity of implicit age attitudes at the national level. I hypothesized that the cumulative cultural associations between older adults and negativity would be stronger in nations with proportionally larger older populations, because of greater discussion of national concerns about the elderly and aging. I found that national averages of implicit and explicit age attitudes favored young more strongly for nations with larger older populations; this relationship persisted when accounting for nations’ socioeconomic development and their collectivist orientation. I also contributed to research that found that national averages of citizens’ implicit, but not self-reported, gender-science stereotypes reflected nations’ sex differences in both science and math achievement on a standardized examination of 8th graders (Nosek et al., 2009, *PNAS*). Taken together, these results suggest that implicit attitudes and stereotypes may serve as national indicators of cumulative, cultural positivity or negativity of social information about different social groups.

**Religious and Political Ideology**

Despite religion’s centrality in many ordinary Americans’ daily life and group identities, experimental research in psychology has focused on political ideology at the expense of religious ideology. This secondary line of research grew from my realization that my childhood immersion in the details of Protestant theology (as the daughter of an Evangelical Calvinist minister) could broaden social psychology’s understanding of ideology. In this line of research, I seek to understand how individual differences in political and religious ideology affect individuals’ attitudes and behavior, often in unintended ways.

In my master’s thesis research (Lindner & Nosek, 2009), I investigated how individuals’ own political beliefs affected whether they extended political tolerance to legal but ideologically-extreme speech on both sides of the political spectrum, while also unobtrusively manipulating the speaker’s ethnicity. Despite individuals’ belief that their principles determined their judgments, both their political ideology and implicit ethnic biases influenced their political tolerance of the speech acts. This research highlighted how implicit social cognition and experimental designs can shed new light on persistent questions in other fields.

I drew from my research interests both in prejudice and religious ideology to supervise the honors thesis research of undergraduate Oth Vilaythong Tran. We (Vilaythong, Lindner, & Nosek, 2010) developed an experimental intervention that unobtrusively primed the Golden Rule’s message of tolerance. We manipulated whether it was attributed to the Buddha or Jesus Christ to test whether the intervention would alter Buddhists’ and Christians’ self-reported or implicit anti-gay attitudes. Rather than decreasing bias, we found among Christians, the Golden
Rule’s message of tolerance instead increased self-reported prejudice when attributed to the Buddha, a religious outgroup leader, and did not alter prejudice when attributed to Jesus. This line of research emphasizes the importance of attending to features of the messenger in calibrating the potential effectiveness of messages intended to reduce prejudice.

My current research experience, on how individuals’ implicit thoughts and feelings influence their considered judgments or behavior, has particularly focused on how ideology affects judgments. My future goal for this line of research is to better understand how, why, and when implicit biases spill over into judgments and behavior across situations, as well as whether the explicit suppression or counteracting of one’s own bias can itself become automatic.

**Research Skills**

Finally, my research experience and interests have led me to develop broad expertise in implicit social cognition, along with skills in implicit methodology, Internet-based study design and administration, and advanced statistical analyses (e.g., mixed modeling, structural equation modeling, logistic regression, and interpretation of complex interactions in general linear models). My interest in aging research also afforded me the opportunity to become a graduate fellow in the International Max Planck Research School on the Life Course (LIFE). As a fellow, I took part in advanced coursework on lifespan development methodology and in semesterly week-long conferences on lifespan development. In my future research, I hope to use this knowledge and experience to evaluate hypotheses that are not readily testable using the experimental designs that are typical in social psychology (i.e., small samples of undergraduate student populations).