

Proposal

**\*(1)** As humans, it is to our great benefit to have the ability to analyze faces and expressions. For instance, humans can glean an incredible amount of information from brief glances at others' faces, such as emotion, age, and gender (Ambady & Weisbuch, 2010). People can also read the affective expression of a face in order to infer information about the person they are looking at; for example, people can infer personality impressions (e.g. dominant) from facial expressions (e.g. anger; Montepare & Dubish, 2003). Current theories concerning the perception of facial expressions of emotion argue that people automatically draw inferences of others' emotional *states*, or internal mental states, from the facial expressions they observe (e.g. Ekman, 1992). For example, when one person decides that another person looks angry, scientists describe this scenario as "mind reading" in which the first person recognizes the mental and physiological state of the second (Baron-Cohen et al., 2003). Yet even according to such mental-state models, the presumed adaptive function of reading facial expressions is to anticipate others' behavior (Baron-Cohen et al, 1985; Frijda, 1986). As one example, the perception of facial anger enables perceivers to anticipate aggressive behavior from another person and prepare accordingly. We take this adaptive function seriously and suggest that facial expressions are merely predictive cues for behavior. For example, when people claim a facial expression is one of "anger" they are suggesting that the person is exhibiting or will exhibit "angry" (i.e. aggressive/dominant) behavior.

**\*(3)** We are proposing a theory of *social prospection* that focuses on behavior prediction instead of mental state inferences. According to our theory, an affectively charged face elicits a behavioral forecast (rather than a mental state inference) automatically and immediately (Weisbuch & Adams, 2012). Emotional inferences are a tangential by-product of this process and linguistic convention. For example, if an individual sees another person with knitted eyebrows and a deep frown (a prototypical expression of anger), Ekman states that the perceiver would first make an inference as to the emotional state of that expresser. Only after generating this emotion inference would the perceiver then predict that the expresser may soon act aggressively. Conversely, in our social prospection model, the individual would see the stimulus of an affectively charged face (again, prototypical anger), and immediately predict that his peer will act aggressively, thus being able to respond (avoid) the angry expresser much faster. **\*(2 and 4)** Since social prospection posits only one step between stimulus perception and behavior prediction, people can make these predictions more efficiently and with less interpretive ambiguity than in traditional models, which require the extra step of understanding another person's mental state. **\*(1)** Although prior work demonstrates that people can make speedy judgments of facial emotion –identifying emotions such as anger and fear after less than 1/20<sup>th</sup> of a second of a exposure to a face (e.g. McAndrews, 1986) – it is not clear what perceivers are perceiving. Study participants simply provide an emotion label for a face and are not given any instruction on what that label means, such that perceivers could be referring to angry behavior, angry thoughts, and/or angry physiology. **\*(3)** Ultimately, we hypothesize that (a) the *most accurate* perceivers of emotion are those that use emotion words to describe behavior and (b) emotion judgments based on facial expressions are *ordinarily* judgments of emotional behavior rather than emotional thoughts and internal states.

**\*(2)** Using the stimulus images rated equivalently difficult across conditions in the pre-test, we have then designed an in lab study that will prime participants with the selected object images. Our independent variable in this study will be the instructions given to participants

according to random assignment (Instruction Type: external focus, internal focus, or no instructions/control). This instruction manipulation is intended to procedurally prime the participant with a particular mindset, either focusing on the external behavior of the objects or focusing on the internal mechanism or state of the objects. “Procedural priming” consists of using a certain stimulus in an attempt to activate specific semantically-related concepts in the brain in order to produce facilitation effects (Neely 1977). For example, an individual shown an image of a table will be primed with the concept of “chair.” Once primed with a particular focus (internal/external), participants will then be asked to rate a block of emotionally expressive faces (IASLab Face Set). **\*(1)** We predict that the accuracy of the emotion identification will vary according to the instruction manipulation of the priming block condition.

**\*(4)** There will be three conditions in the lab study, with two blocks per condition (one priming block of 3 object images and a second block of emotionally expressive faces). Condition 1 will prime the external focus, with block A using 3 priming object images from the pre-test and asking the participants to make ratings of the external behavior of that object, and block B asking for judgments of the emotion on the presented faces. Condition 2 will prime the internal focus, with block A using 3 priming object images from the pre-test and asking the participants to make ratings of the internal state of that object, and block B asking for judgments of the emotion on the presented face. Condition 3 is our control condition. In this condition, in block A, participants will only be shown the object images without any explicit instructions for judging these images. Instead, they will simply be asked to “describe the image.” In block B, participants will be asked for judgments of the emotion on the presented face.

**\*(5 and 6)** (Author could spend more time detailing the process for finding participants and addressing solutions if they cannot find enough participants).

We predict that accuracy of these emotion identifications in block B will be significantly impacted depending upon the condition in which the participant is placed. We expect increased accuracy in the External Instruction condition, in accordance with our theory of social prospection, compared to the Internal Instruction condition. We do not suspect a significant difference between the Control condition and the External Instruction condition, but do predict a significant difference in the accuracy of emotion ratings between the Control condition and the Internal Instruction condition.

**\*(8)** We hope to collect the necessary data (from 150 participants) in April, and in early May I will help to analyze the data using SPSS. **\*(1)** Once we have organized our data, I will have the opportunity to present our findings both to the lab group and also prepare a poster for the PINS Symposium.

**\*(1)** I am currently a research assistant in the Social Perceptions and Attitudes lab, and have been working to create this study with Max Weisbuch, the faculty member leading the SPA lab, and his graduate student Michelle Zad. **\*(1)** I hope to lead my own research later on in my academic career and this position is a great start to familiarize myself with the process and gain invaluable experience with research methods and the intellectual processes that go into creating a study. Next year I plan to attend graduate school for a Master’s program for forensic psychology, and this research will also greatly aid in preparation for this future endeavor. My part in this study provides me with not only hands-on learning of much needed skills in research but also an introduction to advanced psychological concepts and questions in the field.