Ambady & Skowronski (2008) argue that understanding others by forming impressions of them may be an evolutionary benefit. If these judgements are accurate, they can substantially improve one’s life in a group by enabling them to choose a trustworthy partner or, alternatively, finding someone weaker to swindle for resources (Ambady & Skowronski, 2008).

Schaller (2008) argues that social interactions may have some potential dangers as well. For instance, one may experience harm from others caused by competition for material resources or mates; also, when someone from the same social group carries a communicable disease one has an increased risk of getting infected as well; also harm from other group members who may want to steal any material resources, entice one’s partner away or fail to uphold any social rules (Schaller, 2008).

Over time, fast and frugal trait inference mechanisms were adaptively advantageous as they minimized cognitive resource costs (Gigerenzer, Todd & the ABC research group, 1999). More importantly, inferential speed is critical to successful avoidance of any perils that may arise while living in a group. For instance, if someone is untrustworthy, or intends to cause us harm, physically or psychologically, it is advantageous to detect such possibility as soon as possible and prevent the damage (Schaller, 2008). Schaller argues that only a small amount of negatively loaded information about another person is sufficient to form a negative impression, while positive impression formation takes more positively loaded information. Moreover, positive judgement may be reversed to a negative one with hardly any effort, whereas it is much more complicated to reverse a negative judgement to a positive one (Schaller, 2008). This can be perfectly illustrated by Nesse’s (2005) “smoke detector principle”: failure to recognize a real threat (a false-negative error) is usually a lot more detrimental than detection of a threat that is not real (a false-positive error) (Schaller, 2008).

\*remiantis tuo, paminet pozityvu pavyzdi ir idet studija su reakcijom i pozityvius stimulus\*

Research shows (...) that positive social relationships have a positive impact on one’s life quality

\*ivardinti dimensijas: Todorov & Oosterhof, 2008, Sutherland et al., 2013\*

Evolutionary explanation is logical; however, such behaviour can be open to other explanations

Drawing upon Gibson’s (1979) ecological approach to social perception, Zebrowitz & Montepare (2008) argue that facial traits have some adaptive value in the sense that they serve as an informational database for others. For example, babyfaced people (having full lips, large eyes, wide forehead and a small chin) may be perceived as weak and helpless, leading people into thinking one may need to be taken care of (Zebro...). In contrast, those possessing traits resembling an angry face may be perceived as potentially dangerous and thus to be avoided (Marsh, Ambady, & Kleck, 2005).

Albeit ecological theory suggests that our perceptions of others will be accurate more often than not accurate (Kenny & West (...) argue that these perceptions must be accurate to some degree, as otherwise they would not be functional), favouritism towards certain traits may result in biases through overgeneralization effects (Zebrowitz, 1996, 1997; Zebrowitz & Montepare, 2006, 2008). Overgeneralization effects mostly act on the cues resembling infants, emotional states, low fitness, and identity and, according to the ecological approach, even a hint of traits associated with these qualities can result in an appropriate response (Zebrowitz & Montepare, 2008).

In summary, evolutionary and ecological theories are closely intertwined and only by looking at them at the same time we can explain the basis for first impression judgements.

How long does it take to make a judgement of another? Several studies have investigated what is the minimal time required to form an impression. Study conducted by Willis & Todorov (2006) manipulated exposure time (100 ms, 500 ms, or 1000 ms) of unfamiliar faces and looked at trait inferences of aggressiveness, competence, trustworthiness, likeability, and attractiveness. They found that judgements made after 100 ms presentation of faces highly correlated with judgements made after unlimited exposure, suggesting that 100 ms is enough to make a reliable judgement. The same year, Bar, Neta, & Linz (2006) conducted research investigating threat judgements on faces judged to have no explicit positive or negative expression. Participants were asked to rate each of the faces presented by answering how threatening they seemed. Bar and colleagues concluded that even 39 ms of exposure was enough to infer threat. However, stimuli presented for 26 ms did not have the effect, suggesting that awareness is necessary for trait inferences.

\*ispletot kalbant apie reakcija i pozityvius stimulus ir susiet su evoliucine teorija – kodel pavoju izvelgia greiciau, nei teigiamus bruozus\*

Different costs of a failure to men and women in terms of mating Schaller, 2008

Indeed, interpersonal impressions are argued to serve an adaptive function, enabling individuals to successfully engage with others in social interactions (McArthur & Baron, 1983), and affect the course of relationships development (Sunnafrank & Ramirez, 2004).

Willis & Todorov (2006) manipulated the exposure time (100 ms, 500 ms, or 1000 ms) of unfamiliar faces to investigate the minimal conditions required to infer aggressiveness, competence, trustworthiness, likeability, and attractiveness. They found that with longer exposure time correlations between the experimental and control groups did not increase significantly. However, more time affected participants’ confidence. After 500 ms and 1000 ms exposure of stimuli, participants were more inclined to be confident with most of their judgements. The authors suggest that different trait inferences may have different detection thresholds (Willis & Todorov, 2006).

*For all five judgments, judgments made after 100 ms exposure to faces closely agreed with control judgments made in the absence of time constraints. More importantly, this agreement did not improve with additional time exposure, suggesting that 100 ms exposure is sufficient for people to form a reliable person impression.*

*In 3 experiments, Todorov, Oosterhof & Pakrashi (2009) found that even after 33 ms exposure, judgements were better than chance in discriminating trustworthy-looking from untrustworthy-looking faces.* *With the increase in exposure from 33 to 100 ms, the correlation between judgments made after limited exposure and control judgments made in the absence of time constraints increased dramatically. Bar et al (2006) obtained similar findings foe judgements of perceived threat in emotionally neutral faces. Judgements made after 39 ms (but not juggements made after 26 ms) correlated highly with judgements made after 1700 ms. As in our studies, participants were not able to make trait judgements after subliminal exposure to faces but were able to make these judgements after presentation times that are at the subjective threshold of visual awareness of faces (Pessoa rt al, 2006a; Pessoa et al, 2006b).*

*A series of data-driven behavioral studies confirmed the hypothesis that trustworthiness judgments approximate the valence evaluation of faces (Oosterhof & Todorov, under review). First, we identified trait dimensions that are spontaneously used to characterize faces. Second, for each of these trait dimensions, a group of participants rated emotionally neutral faces.Third, the mean trait judgments were submitted to a principal component analysis. The first principal component accounted for 63% of the variance. All positive judgments (trustworthy, emotionally stable, responsible, sociable, caring, attractive, intelligent, and confident) had positive loadings. and all negative judgments (weird, mean, aggressive, unhappy, and dominant) had negative loadings on this component. Most important, judgments of trustworthiness had the highest loading (.94), suggesting that these judgments best approximate the valence dimension of face evaluation. This was the case even when we excluded trustworthiness judgments from the principal component analysis. The correlation between the first principal component (the evaluation factor) obtained from all trait judgments except trustworthiness and trustworthiness judgments was .94 (FIG. 2D), indicating that a single trustworthiness judgment was sufficient to summarize the evaluative information present in all other trait judgments.*

*For example, recent studies show that angry faces trigger automatic avoidance responses (Adams et al. 2006; Marsh et al. 2005)*

*To validate that the model successfully manipulates face trustworthiness, we randomly generated neutral faces and produced untrustworthy and trustworthy versions for each face. Then, we asked participants to judge these faces on trustworthiness. As shown in FIGURE 4B, trustworthiness judgments of faces tracked the trustworthiness predicted by the model, although people were more sensitive to changes in trustworthiness at the low end of the spectrum than at the high end.(Todorov, Oosterhof 2008*

*self-fulfilling prophecy perspective, a person with an untrustworthy appearance who is consistently treated as an untrustworthy individual may develop corresponding behavioral responses. Of course, the opposite prediction can also be made, namely that people may work hard to overcome stereotypes triggered by their appearance, and there is evidence for this self-defeating prophecy effect (Collins & Zebrowitz 1995; Zebrowitz et al. 1998a; Zebrowitz et al. 1998b).*