Project Title: Give a Dog a Bad Name: Childrens’ Ability to Process Canine and Human Facial Expressions.

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Background to the project:

Epidemiological data indicate that in the US, 4.5 million people are bitten by dogs each year with a total of 885,000 needing medical attention (CDC, 2009). On average 1 person in 100 is a victim of a dog bite needing medical attention (Overall & Love, 2001). The public health significance of dog bites is especially relevant for children, who are twice as likely to be hospitalised due to dog bites as adults or adolescents (Ozanne-Smith, Ashby, & Stathakis, 2001).

A significant correlation has been found between the age of the child victim and the incidence. Younger children aged between 5 and 9 years old are the most frequent victims, with boys being more frequent victims than girls (Kahn, Bauche, & Lamoureux, 2003). Children are more often injured in the face, neck and upper torso regions (Brogan, Bratton, Dowd, & Hegenbarth, 1995; Mitchell, Nanez, Wagner, & Kelly, 2003; Schalamon, Aindhofer, Singer, Petnehazy, Mayr, & Kiss et al., 2006) leading to life-threatening medical conditions or related psychological conditions such as Post-Traumatic Stress Disorder (Peters, Scottiaux, Appelboom, & Kahn, 2004).

Prevention in the past five decades has generally been approached by teaching children safety rules or how to recognize dog signalling (De Keuster, Moons, & de Cock, 2005; Love & Overall, 2001). In humans the processing and understanding of the facial expression of emotions of other humans develops throughout entire childhood, reaching adult performances levels at around 10 years of age or even later (Gao X, Maurer 2010). Recently, it was found that young children do not discriminate a dog’s body signals, such as aggressive posturing (raised hackles and lowered head) but look mainly at the dog’s face instead. However, they often do not understand the dog’s facial expression and can confuse a fearful or angry dog with a friendly one (Lakestani et al., 2006). An alternative approach which could be used with these current approaches is the use of physiological measures more traditionally associated with experimental and biopsychology, for example heart rate and skin temperature. Also eye tracking methodology has been used to investigate visual attention to both dog and human faces (Guillon et al., 2014).

Methods to be used:

The research will combine more traditional methods used to examine how adults and children recognize dog signalling with physiological measures including the eye tracker assessing the accuracy of children and adults perception of dogs’ visual expressions and body posture.
Objectives of the Research:

The aim of the proposed research is to design and implement a series of experiments that assess children’s’ perception of dog expressions. It will explore how children’s age may be a factor in their ability to correctly discriminate between angry/aggressive expressions and calm/happy expressions.

Skills required of applicant:

Training will be offered in physiological measurement techniques, the position would suit a student with an interest in physiological and experimental psychology.

References:

Guillon, Q; Hadjikhani, N; Baduel, S; Kruck, J; Arnaud, M; Roge, B (2014). Both dog and human faces are explored abnormally by young children with autism spectrum disorders. NeuroReport, 25, 1237-1241.