

## Hugs tell us much about shared experiences

February 3 2011

(PhysOrg.com) -- In the run-up to Valentine's Day, couples the world over will be thinking about how they can convey their love to their partner in a meaningful and lasting manner.

One of the most obvious ways a person can share their <u>feelings</u> is through physical gestures such as hugs which, according to new research from the University of Dundee, last an average of three seconds.

The study into the post-competition embraces of Olympic athletes, which was published in the latest edition of the *Journal of Ethology*, was led by Dr Emese Nagy, from the University's School of Psychology.

This research confirmed that a hug lasts about as long as many other human actions, and supports a hypothesis that we go through life perceiving the present in a series of about three-second windows.

Cross-cultural studies over the past century have shown that people tend to operate in these bursts. Goodbye waves, musical phrases, and infants' bouts of babbling and gesturing all last about three seconds.

'What we have is very broad research showing that we experience the world in these three-second time frames,' Dr Nagy explained.

'Many basic physiological events, such as taking a breath and exhaling, last about 2-3 seconds each. When music and dance and other things are broken down we can see that these actually consist of singular movements bound together.



'This has been referred to as the 'feeling of nowness' and we began looking at how long these moments last and whether we can objectively measure their duration.

'The memories of these moments become our personal stories, but they are our own individual experiences – what we wanted to do with this research was explore whether we ever share these movements which are so unique and subjective.

'We wanted this study to go a step further and see whether these moments can be experienced by two people at the same time – if we can ever share our internal reality – and whether these moments ascribe to the three-second hypothesis.'

Dr Nagy, a keen gymnastics fan, was struck by how the behaviour of athletes encapsulated strong emotions. She hit upon the idea of analysing the embraces of gymnasts at the Beijing Olympics to see whether their hugs, either celebratory or consoling, fitted with the previously identified pattern.

Most of the existing three-second research had been done on individuals, and she wondered whether the pattern would hold for an experience shared between two people, especially one as intimate and emotionally charged as an embrace.

Dr Nagy then conducted a frame-by-frame analysis of video recordings of the Olympic finals in 21 sports, among them badminton, wrestling, and swimming. She had an independent observer time 188 hugs between athletes from 32 nations and their coaches, teammates, and rivals.

Regardless of the gender or national origin of the athletes and their partners, the hugs lasted about three seconds on average. The results reinforce the idea that intervals of about three seconds are basic



temporal units of life that define our perception of the present moment.

Dr Nagy continued, 'I was watching the Olympics and thought that this was the perfect example illustrating how people experiencing these feelings want to share them with other people. It was a shared moment which we could clearly mark the beginning and end of.

'The other people may be similarly emotionally charged, such as team mates and coaches, whereas others may be competitors or more dispassionate observers. The interesting thing is that, regardless of culture, nationality or gender, they all shared the moment through a hug whether they were expressing happiness, comforting, or being comforted.

'Our research illustrated that these feelings can be transmitted to another person to make the movement a shared experience. These moments may increase the likelihood of sharing further experiences, synchronization of further movements, and ultimately, could lead to the feeling of 'togetherness' between people.'

Provided by University of Dundee

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