# An Immersive Demonstration of Animal Presence Through Display of Photos

**Bill Ross[i]**

[i] Self-funded

**Abstract.** A dynamically-generated, 4-wall slide show is proposed, with image timing and selection governed by Phobrain technology, as demonstrated on the phobrain.com website in a two-photo mockup. Whereas the mockup uses mouse click and view timing as inputs to its 'personality' used to select photos, the proposed instantiation would use crowd movement, coordinating image timing and selection with inputs from motion sensors. The hope is that people might feel through the consistency and variety of response that they are in a living thing that feels their presence, and even contributes to their internal dialogue. Alcohol could be involved, in deference to the lizard-level personality implemented so far by Phobrain.

## 1 INTRODUCTION

**Phobrain** selects photos by mapping user behaviour to a variety of pairwise distance metrics that are based on assigned keywords and computationally-derived image characteristics. The mapping, by its consistency and overall structure, is intended to create a sort of personality. Philosophically its goal is to replicate the presence one can feel with a responsive pet by responding to the viewer in the moment with photos. Should that be achievable, the conjunction of knowing it is not alive with a sensation that it lives is intended to change our understanding of agency and how we apprehend it, without need for much higher-order modelling of thought processes or emotions. I am more trying to parasitically stimulate people to perceive life as a sort of optical illusion, than to generate something that lives other than as a chameleon-like thing that provides some kind of insight into the human condition.

If the sense of presence achieved is sufficient, Phobrain may be of use in prevention and treatment of attachment and autistic disorders, as it presents a non-threatening form of engagement that could provide a sense of recognition for children who distrust people and words.

The present system is within the reactive layer of the CogAff model [1]; the claim is that Phobrain is approximately a lizard brain, or a Pavlovian controller in the context of Dayan and coworkers [2], with a plan for raising this to the mammal level, or Dayan's Habitual controller, by using deep learning to learn to maintain a connection with each user.

I theorize that we share a sense of presence with animals by our perception of their intentions toward us, and their exhibition of signs of awareness of ourselves. If the lizardly reactive Pavlovian controller in Phobrain detects a restless user, it increases the contrast of photo selection to show a struggle for attention. Detection and response remain ad hoc for now, but this and about a hundred other strategies, using a history of 10 user responses, exhibit a coherence in intention that is intended to be a subliminal analogue to the sense of mutual inspection with an animal, as bodies respond to each other. (One hundred strategies is counted over the entire site, which includes a single-photo version with modalities including drawing on the photo.)

Although the level is lizardly, the punch can be psychological, particularly the keyword-based associations, which are intended to resemble a graphical version of a mother teaching her child language by repeating 'dog' and pointing to dogs in a picture book while varying her speaking tone (e.g. fractal dimension) to keep the baby's attention. The frame of mind one achieves in the baby role when figuring out the keyword-based associations is like what a psychoanalyst might experience with a robotic tennis server throwing adaptive associations to spot. The colour-based associations on the other hand provide a more free-associative and relaxing enjoyment, with coherent interactive exploration without predictability.

## 2 THE PROPOSED INSTALLATION

Photos projected on four walls will be coordinated in response to people's movement using keywords (a somewhat cognitive strategy) and colour analysis (a more subliminal strategy) to signal a sort of intent. If general movement out of the room is detected, higher-contrast photos might be shown, or sunsets as a symbol of farewell. If circular movement in the room is detected, the photos might progress around the room at the same pace, changing as well. In general, the room will explore the 6.10e14 foursomes of the photos one unique 11,000-photo trajectory after another. The intended experience is that the participant should feel that they are inside a living creature whose low-level but symbolic thought processes respond to their own thoughts, knowing that they are projecting or experiencing the effects of suggestion. Experiencing purpose-generated associations that invoke archetypes is like getting on a bike and riding around in Plato's metaphor of the cave, rather than sitting and waiting for one's mind to make associations on its own.

The 2-picture prototype for the conference is based on 5K images by three people, mostly me, all portrait-oriented. As an example of how an option works, when you click the yellow + icon for a colour-based match, a pair of distance functions is first chosen from a set of 10, as a function of the times you have looked at the previous 10 pairs of photos. The first distance function is used to pick the new photo on the left from the intersection of the sets of photos at greatest distance from the current pair. Then a match to that photo is chosen in the second colour space for the new photo on the right. Fallback strategies are used as the colour spaces (with their different shapes and

distributions) fill with already-seen photos. This complexity provides variety, coherence, and response to the user that can be contrasted with the purely-random choices of the blue | icon, the colour-opposite pairs of the red – icon, or most cognitively, the keyword-based choices of the green + icon: all but the random option factor in user timing for responsiveness and variety. (The colour algorithm used for the match and/or any keywords that match between the photos can be seen by clicking in the grey area to either side of the control icons. Clicking on a photo replaces it with one that is keyword-matched to the photo next to it. Clicking in the space next to a photo toggles it with the previous photo in that spot.) The proposed installation's key feature would be that user gestures would emanate from the crowd, perhaps even with participatory crowd research during the event as the motion sensor network gives live results. ("Everyone to the centre. That corner. Now split corners.") Also there will be an additional 5K landscape-oriented photos to draw on, and more may be incorporated if donors are available.

## 3 SUMMARY

The sooner funding is made available, the more options will be available when conference time arrives.

## REFERENCES

[1] Sloman and coworkers, CogAff Project,
    http://www.cs.bham.ac.uk/research/projects/cogaff/

[2] P. Dayan, 'The role of value systems in decision making', in 'Better than Conscious? Decision Making, the Human Mind,  and Implications for Institutions' *, eds. C. Engel and W. Singer*, 51–70, MIT Press, Frankfurt, (2008).