

A Study on the Perception of a road in Bresse by Galliformes Through the Use of an Analog Chicken

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Introduction

How do animals perceive the world ? In particular, what is their auditive experience like, in a situation where their life may be at stake, for example for a chicken on the side of a road where cars pass at high speed? Will the chicken cross the road? This study proposes an answer through the use of an analog chicken whose electronic ears can allow the experimenter to perceive the world with Galliformes perspective, here, in the heart of Bresse.



Picture 1 - The 3D-printed Analog chicken. Note the holes for the electronic ears.

Animal-human duality

For some researchers and philosophers [1] [2], the defining characteristic of being human is our ability to move backwards and forwards in time and think in stories. For example, by hearing a car sound decreasing in amplitude on the right side, while increasing on the left side, we are able to reconstruct the reality of

the car approaching on the road, passing-by, and then moving away. When music or talks are superimposed, we understand that the driver listens to radio.

We become the stories we tell ourselves, while animals are very in the moment. They don't have an idea of the future or the past as a narrative that they tell themselves [3] [4].

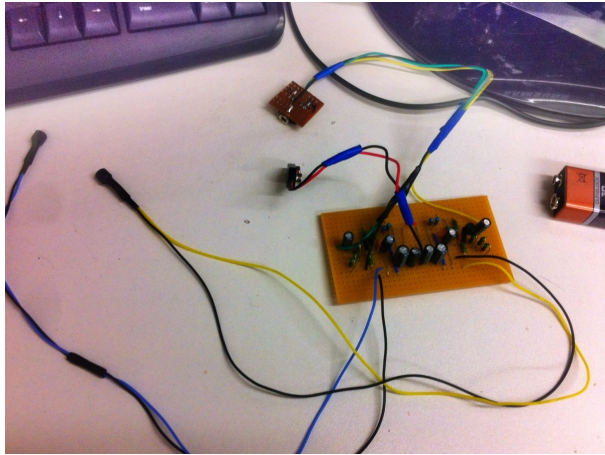
However, men have always wanted to become animals : some paintings of bison and bird headed men found in European caves are more than 30,000 years old. The shamans of the Upper Paleolithic era, through dance and imitation, were able to enter a "between-the-worlds state" and begin to see the world through the eyes of an animal. Shamans wore animal skins and feathers and underwent transformations into animals during spiritual journeys. In addition, animals served as humans' guides, rescuers, ancestors, totems and sacrificial victims.

Men have therefore found some truth, comfort, or maybe a particular place within a human group in being an animal, at least temporarily.

Experimental apparatus and setting

The Analog Chicken was designed specially for this study. It was then printed in the Fab Lab of Montagny using the 3D printer. It was equipped with two high dynamics miniature microphones fitted in the chicken ears. A stereo amplifier provides a first level of amplification so that the acoustic signal can be recorded by a portable computer. Sounds

were recorded in-situ using a 44.1kHz sampling rate.



Picture 2 - The stereo amplifier

The first recording was performed by placing the analog chicken outside the chicken pen, close to the corn grains. No animal was hurt or stressed during this study.

The second recording took place on the side of Chemin Vessieres, in Montagny-Près-Louhan (71), in order to capture the activity of the road.



Picture 3 - experimental setting

Experimental results

The analog chicken enables an immersive experience to humans : the sounds of the environment are strong and vivid, the source of sounds can be clearly located through the use of the binaural recording and the 3D-

printed chicken head allows a perception of the world at the height of the real animal. Because of the origin of modern humans in the West African Savannah, we have developed as a standing biped to be able to see predators above the long grass. As a result, humans are relying heavily on sight compared to other senses [3]. Hearing as a chicken hears offers an experience different from our everyday perception: the sounds coming from the ground are stronger, for example the sounds of the other chickens picking grains, the sounds of feet on the ground, indicating its nature. Vehicles can be heard from a long distance as their sound is reflected at low elevation by the hard surface.



Picture 4 - A subject of the study getting interested in the apparatus

Conclusion

Becoming another animal can make us more humble. It's important to remember every now and again that we are animals, because it helps us to think ourselves away from some of the more crazy aspects of our society and humanity [2]. Being an animal would help us remember that there is no manifest destiny to the human species – we are just among all these other creatures. The innate certainty that everything will be OK in the end and we'll get to that Star Trek utopia – that is definitely not certain. That is just a story.

You may ask yourself “is this really serious ?”
We propose you to make the experiment yourself with the headphones that will immerse you in a chicken world.

Acknowledgements

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Biographies

Olivier Moreau is an engineer and physicist, he graduated from the CUST (Institut des Sciences de l'Ingénieur), Clermont-Ferrand in

1995. He specialized in materials analysis by mass spectrometry until 2000, then worked in the microelectronics industry, contributing to more than 10 articles, and 2 patents. After 4 years in the Silicon Valley, he missed the terroir products from France's regions, such as the Poulet de Bresse, the Saint Nectaire, and the wine from his native Bourgogne. He came back in 2016 to work in Grenoble in the microelectronics industry, to take care of his roses, to play electronic music and to perform obscure science studies with his friends.

Morgan Allard is professor emeritus of Foutracology at the MIT (Montagny Institute of Technology). He is the father of the cybernetic chicken ears system. This system is the most efficient in the world to perceive the fear of chicken by the side of the road and to make his friends laugh. He's also an R&D engineer for IT security.

Philippe Blanc trained as a fine artist, Philippe's focus on computer and digital art influenced his interest in programming which eventually lead to becoming a software engineer. He worked for several startups before founding two companies in the late 1990's. During this time he continued his art career which included exhibitions in New York, Germany, San Antonio, and Portland. Philippe still pursues his interest in open source technology and continues to contribute to innovative and creative development practices through several ongoing projects.