**Research and Critical Analysis**

**Shalin Patel - 0194037**

**Monroe College,**

**New Rochelle.**

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References:

Parsons, Thomas D., Gaggioli, Andrea, Riva, Giuseppe. (April 2017). Virtual Reality for Research in Social Neuroscience. Brain Sciences, 7(4). Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=122753109&site=ehost-live>

The current innovations and advancements in social neuroscience developed an entire new view in the concept of social processes and our neurons in the brain. The research in this field consist of simple and constant spur that miss sometimes the details of our routine life activities and our social interaction with that. It is true that it is a qualitative research, but the increasing attentiveness in this research has allowed researchers to measure the emotional activities taking place with neurons. And in this research along with maintaining control in experiments, virtual reality’s possibilities are also focused. Virtual reality is a computer-generated scenario that gives us the reality experience. And it is a technology that describes a three-dimensional, computer generated environment which can be explored and interacted with and by a person. In this entire research, the technicality and features of virtual reality and how it works has been discussed and then the effects and possibilities of virtual reality on social neuroscience customs with some experiments.

As a professional in the fields of both virtual reality and neuroscience research, Thomas D., Andrea, and Giuseppe have authority on and investment in the field of virtual reality for research in social neuroscience that has been discussed in this article. Their knowledge for virtual reality for research in social neuroscience is sound and well-supported. This article is intending to research of effects and possibilities of virtual reality on social neuroscience. The possibilities in this field are immense and some advanced research has already been done in this field, but it requires to go ahead and achieve it. The experiments that have been already conducted and the small successes which has been received by the researchers, it works as a link in connecting them. Overall, this article illuminates the research about effects of virtual reality on neuroscience by providing valuable insight into a potentially overlooked connection in virtual reality for research in social neuroscience.

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Zhou, Wei, Wang, Jingjing, Wang, Kaiyue, Huang, Bin, Niu, Lili, Li, Fei, Cai, Feiyan, Chen, Yan, Liu, Xin, Zhang, Xiaoyan, Cheng, Hankui, Kang, Lijun

Meng, Long, Zheng, Hairong. (May 2017). Ultrasound neuro-modulation chip: activation of sensory neurons in Caenorhabditis elegans by surface acoustic waves. Lab on a Chip - Miniaturisation for Chemistry & Biology, 17(10). Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=123077234&site=ehost-live>

Ultrasound neuro-modulation is becoming now a topic of discussion as a non-invasive method. In this research, entire work is going on a chip, which has an ability to commence reversal behavior and energizing neurons of C. elegance under the tonic of a single shot of short pulse ultrasound. Approx., 86% of worms respond to this ultrasound neuro-modulation chip. In vivo calcium, results depicts that the activity of a polymodal neurons (ASH), in C. elegance can be directly awaken by the ultrasound. And on the contrary sound, s thermal neurons cannot be initiated by the ultrasound at the same temperature and parameter when this initiating process is very tiny. So, the effects of the ultrasound are the reasons for neural behavior modulation.

Being a practitioner in the stream of ultrasound neuro-modulation, researchers in this field have supremacy on and contribution in the right of ultrasound neuro-modulation chip which is capable of initiating a reversal behavior. Their research in this technical field is supported by the National Natural Science Foundation of China, the China Postdoctoral Science foundation, the Shenzhen Basic Science Research and the Shenzhen Science and Technology Innovation Committee Grant, which shows the credibility about the research. This article is intending about responses of C. elegances to ultrasound stimulation on a neuro-modulation chip. Researchers in this research acknowledged the worth that has already been done in regards this connection, but explicitly states why this result is viable and realistic. In contrast with the customary ultrasound transducers, the feeble energy created by the chip is restricted along the exterior of the substrate, which enables the neuronal stimulation with a tiny contributed power. Overall, this article is about the device which is ready and compatible with electrophysiological recording and calcium imaging and so on which provides strong tool to research more about the working pattern of ultrasound neuro-modulation.

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Herta, J, Koren, J, Fürbass, F, Zöchmeister, A, Hartmann, M, Hosmann, A, Baumgartner, C, Gruber, A. (July 2017). Applicability of NeuroTrend as a bedside monitor in the neuro ICU. Clinical Neurophysiology, 128(6). Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=123015156&site=ehost-live>

The main objective in this research is to evaluate that ICU can read the EEG data and interpret it properly or not with the Neuro Trend algorithm with the focus on detection of seizure and sedation depth. There are different methods for it but in one experiment 18 nurses’ review was taken for 120 screenshots of Neuro Trend. And then Interrater and Multirater agreements were compared with the opinion of expert and it was computed for items like location and types of pattern, consistency of frequency, detection of seizure and sedation path. In the current study it has been found that Neuro Trend can be appropriate in bedside monitor and to decide the perfect sedation depth by ICU caregivers needs a more practice and instruction.

As a professional in the field of neuro science, authors have authority on and investment in the connection between Neuro Trend and EEG data in neuro monitor. Their knowledge about Neuro Trend is sound and well supported. The results in this research about Multirater and Interrater agreements were ideal interruption in recording, actions in rhythmic delta and so on. And a considerable corresponds was found for periodic discharges, electrographic seizure patterns, and seizure suspicion. But it got lower agreements in the cases of whose level of sedation is 41.10% and frequency’s consistency is around 47.47 to 79.15%. But overall we can say that in the case of ICU patients, in reducing cEEG’s workload, computer algorithms can be greatly helpful.

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