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Parsons The New School
Advanced Research Seminar
Final Research Paper
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EXCITEMENT FOR SPATIAL EXPLORATION OF ENVIRONMENTS

As a child, it is common to have an urge to climb trees. To get up there, test yourself, how high you could go, what branches would hold and what the world looked like from up there. This was not limited to trees, there was a certain excitement to explore new and unfamiliar environments overall. These times of exploration is what is called an explorative spatial experience. As we grow older, this excitement to explore environments seems to get less common. The easy answer to this is that there are less unfamiliar environments to explore, as we are now more experienced with how different environments behave and feels

like. But by looking at what creates your perception of an environment and how we can alter that into a new one, it is possible to create the same exciting feeling, to explore an environment, as the one you had as a child.

To fully understand why explorative spatial experiences are less common in adults we need to understand the differences of both experiences and perception of adults and children. Children are new to world and have not had the time to explore situations, environments and behaviors as long as an adult. While as an adult, we have most likely been through the same or a similar situation before, thus it is not as exciting and neither do we need a lot of attention to calibrate the surroundings. This explains two arguments of why children are more excited about unfamiliar environments. First, they are excited about actually actively explore a space and discover how things look, behave and feels. Second, a lot more spatial attention is needed to calibrate the world and environments around them. Spatial attention has been seen to increase perceptual processes both on a conscious and subconscious level.[1] Which might be two of the reasons they find more excitement in exploring spatially than

[1] Shin, Kihlo, Moritz Stolte, and Sang Chul Chong. "The Effect of Spatial Attention on Invisible Stimuli." *Attention, Perception, & Psychophysics* 71.7 (2009).*Springer US*. Web. 26 Feb. 2016.

adults. Further, studies have been made of children generalizing distances and sizes of objects in topological relations.[2] In other words, this finding means that children might be experiencing similar situations or environments a lot more differently every time than they actually are. Which further explains earlier mentioned findings.

It has long been thought that our perception is mostly created by our minds. That the mind is our computational organ that receives external information from which it creates your perception based on memories, experiences and ideas.[3] New studies and theories means that perception is about more than that. To perceive is not to passively receive sensations, rather we gain perceptual content by active enquiry and exploration. Perception is not something that happens to us, or in us. It is something we do.[4] This seems to be another argument for why children are more excited about new spatial experiences than adults. They are very explorative and curious.

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[2] Sylva, Ron. "The Spatial Environment." *Art Education* 25.03 (1972): 20-24. Print.

[3] Drayson, Zoe. "Embodied Cognitive Science and Its Implications for Psychopathology." *Philosophy, Psychiatry, & Psychology* 16.4 (2009): 329-40.*Project Muse*. Web. 29 Feb. 2016.

[4] Noe, Alva. *Action in Perception*. Cambridge: MIT, 2004. *Project Muse*. Web. 26 Feb. 2016.

Although we as adults still explore environments and situations, it is in another way. As adults we tend to be more passively spectating instead of actively exploring. We certainly enjoy spatially interesting environments, we travel to see new environments, go to new restaurants with different vibes and looks for an apartment with an interesting view. But what differences us from the exploration that children do is the involvement and importance of bodily movement. Bodily movement contributes to the shaping of perception, emotional experience, memory, judgement as well as the understanding of the self and others.[5] An integral part in the shaping of perception. Children use this tool all the time, when they climb trees, jump through waves in the water or jumps on a trampoline, they are constantly shaping their perception by exploring these environments using bodily movement. The lack of exploration through bodily movement seems to be the main reason why adults aren't as excited about unfamiliar environments as children.

It is of importance to note that all these techniques are all based on theories from the new embodied movement of cognitive science. Whether they are correct or not is arguable. There is

[5] Gallagher, S. *How the Body Shapes the Mind*. Oxford: Clarendon, 2005. *Project Muse*. Web. 26 Feb. 2016.

too this date more research made that is supporting the old school of cognitive science where the mind is seen as the computational organ and not the body.

If we gather all this information about perception and use it to create a new unfamiliar environment, it is most likely that we are able to create a similar exciting feeling for spatial exploration as children have. To create this environment, spatial attention has to be triggered in the user. As we learnt, spatial attention increase perceptual processes. This can be done in many ways. One example is to mimic a known environment and then alter the experience of it. The mind is automatically confused by a situation it expected to know the behavior of. When it realizes this environment behaves differently even though it looks familiar, it needs to be spatially attentive. Another example is to create an environment that is very unlike reality. For example a low-fidelity flat shaded environment. This seems to recruit stronger attentional sources from the user.[6] Once we have triggered the spatial attention the environment has to invite the user to explore the space using bodily movement. As we have learnt this is integral to shaping the perception of the

[6] Mania, Katerina, Shahrul Badariah, Matthew Coxon, and Phil Watten. "Cognitive Transfer of Spatial Awareness States from Immersive Virtual Environments to Reality." *ACM Transactions on Applied Perception (TAP)*. 7.2 (2010). *ACM Digital Library*. Web. 26 Feb. 2016.

environment. This can be fulfilled by interactivity that is reactive to the user's input. It is of my belief that these alterations will most likely make you excited about exploring this space, just like a child again.

We now know that it was not only about testing yourself, how high you could go, what branches would hold or what the world looked like from up in the tree. You was also shaping your perception of an unknown environment by exploring it with intense bodily movement.

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