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CogSci C126: Perception
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Self vs. Non-Self Observation

Introduction and Description of Observation

I am one of the 3 co-facilitators of the Berkeley Review of Cognitive Articles decal. Every week, my co-facilitators and I alternate leading a discussion about a cognitive science research article. Last week, I led a discussion about a research article that explores how our body influences our perception of the world. One section of the article discussed how we establish and maintain a sense of ownership of our body. The researchers found that the brain more quickly identifies parts of our body as belonging to ourselves if they can be seen from a first person perspective, as opposed to parts of the body rarely seen from a first person perspective. For example, a person will more quickly identify her hand as belonging to herself if seen from a natural perspective (such as her hands lying flat in front of her with the palms down), versus when seen from another angle such as palms up. The researchers also found that the back of the body is not seen as belonging to self compared to parts of the body that are frequently seen from a first person perspective.

Verification of Observation

These findings struck a chord with me because I've made similar observations before. I've had strange feelings when I've seen photos of my backside, or of my hands from not

a first person perspective. I did not easily recognize myself. However, when I see photos of my frontside, or of parts of my body easily accessible from a first person perspective, I easily recognize myself. To confirm this article's findings and my own observations, I asked some friends if they ever had this experience. One friend said that when she sees only her backside in the mirror or in a photo, she doesn't quickly recognize that as belonging to herself. Another friend said that whenever she sees her profile in the mirror, she also does not quickly recognize her profile as belonging to herself.

Interpretation

I think this shows that our visual system learns what is considered "self" and "non-self", suggesting that our visual system plays a key role in what we consider "self." I believe this occurs because our visual system needs to learn what parts of the world we can attribute to belonging to ourselves to have successful interactions in the world. I think these findings also imply that we could train our visual system to view another part of our body as belonging to ourselves if this part were seen from a first person perspective on a regular basis.

Relevance

This "self' versus "non-self" finding is relevant to the class material because this course is all about how we perceive the world. We haven't specifically dived into how we perceive ourselves in the world, however, we have discussed how we interpret the world

based on our learned experiences. In this case, we consider the front of our hand as belonging to ourself because of our accumulative first person perspective experiences.

Follow Up

To test this effect, we could conduct two experiments. First, we could show a participant photos of the participant's and others' clothed backs and backs of hands. We would measure how long it took a participant to recognize her body parts in these photos. The hypothesis would be that a participant is faster in identifying her hand than her back. Second, we could test which body parts are more easily identified by the brain as belonging to the self versus not belonging to the self. For this test, we could show a participant photos of the participant's frontside of her body (feet, legs, knees, hands, and torso) and the backside of her body (back and back of the head). We would then time how long a participant can attribute a body part as belonging to "self." We would hope to find that the participant more quickly identifies her frontside as belonging to herself compared to her backside because she can easily see her frontside from a first person perspective.

Conclusion

In summary, the main observation is that the brain identifies certain parts of the body as belonging to "self." I believe this means that our visual systems plays a key role in what we consider as ourself. We could teach the visual system to identify other body

parts to more closely identify as “self” if the visual system if given long enough first person perspective exposure to these body parts.

References

How our body influences our perception of the world - research conducted at York University, Toronto, ON, Canada