

### *On the relationship between linguistics and biosemiotics*

Although “biosemiotics is primarily interested in the study of all pre-linguistic sign systems (Favareau and Kull ,2015:16), the importance of biosemiotics for the study of human languages has been expertly expressed by Favareau and Kull (2015: 23), stating that “...levels of semiosis are not independent, in an organism as a whole or in the semiosphere as a whole, sign processes are interrelated and interconnected into complex, mutually reinforcing webs..... symbolic relations presupposes indexical relations which presuppose iconic relations (p23)....Thus a careful consideration of the biosemiotic level should be inescapable in any principled examination of the underlying working of symbolic systems such as human language...”

Favareau, D., & Kull, K. (January 01, 2015). On Biosemiotics and Its Possible Relevance to Linguistics.

### *On the relationship between culture and biology*

Deacon presents a compelling argument regarding how human language became a social process, a learned ability, instead of an innate quality of our brains. The relationship with our environment is important. Social learnability is crucial. In my research, it is not only the social group, but also the relationship with the local environment that is important. Many categories of space are indexical in indigenous languages. It appears that certain indigenous languages of cultures with a land-based knowledge system, are associated with a high level of spatial intelligence. The question that can be raised is that displacement not only affects social networks, but is is destructive of ecological knowledge that is encoded in languages through indexical and symbolic relationships. Elaboration of this argument is beyond the scope of the current presentation.

Deacon, Terrence W. 1997. *The Symbolic Species: The Co-evolution of Language and the Brain*. New York: W.W. Norton and <https://newlearningonline.com/new-learning/chapter-6/supporting-material/deacon-on-the-symbolic-species>

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She has long been interested and has used emerging, spatial technologies such as GIS and remote sensing to study human relationships to the land. With a passion for teaching and learning in the land, she currently leads a semi-nomadic lifestyle, as independent researcher, part-time agriculturalist and herder to explore the possibility of new rural-based 'laboratories.' For instance, in collaboration with the Bioart society in Finland Recently, she became involved in an indigenous language revitalization program in New Mexico, At present she is making cheese on one of the largest community supported biodynamic farms, located in northern Germany. [jvandere@icloud.com](mailto:jvandere@icloud.com)

Recent publication: Van der Elst, Judith, Heather Richards-Rissetto, Lily Diaz-Kommonen

2018 Sensory Landscapes, developing a Design-oriented approach to Mapping for Healthier landscapes. In *Landscape Review*, A time for designing; Vol. 18, no. 1

# Displacement

Around **7000** different **languages** are still spoken today by the human population. Many of these languages are endangered of being lost. Only recently do we realize that a wealth of **ecological knowledge** is encoded in these languages. Loss of these languages is thus not only a cultural loss. The relationship between loss of biodiversity and loss of language is believed to be mutually causal.

## DISPLACEMENT:

For long, but certainly since Colonial times, cultural eradication has been a strategy of conquest. Beginning in the late 19th century state initiated policies around the world were directed toward removing indigenous children from their home lands to be educated in state operated boarding schools. Until recently, these practices to “civilize” indigenous peoples have left several generations unable to speak their own, native languages. It is only now , when language revitalization programs are initiated and supported to reverse this loss, that the consequences are becoming clear.

## What is being Lost ? (and why should we care as biosemioticians?)

The use of symbols sets human language apart from all other sign systems, however, many languages have indexical categories, especially expressing a relationship to the environment. As a general statement, following Favareau and Kull, symbolic sign systems are not separate but presuppose indexical relations. If language is not innate, like is argued by Deacon and for instance Levinson, then as an extrasomatic means of adaption, it is strongly dependent on context in which it develops.

Displacement, here described as a result of boarding school practices in many indigenous communities, have impacted language development in two important ways, for maintaining socio-cultural relationships, but also the relationship with the environment, specifically capturing the -enriching- spatio-temporal relationships of changes in the land..

### *On the relationship between policy and science*

Although a lingua franca is beneficial to facilitate communication, the policy to eradicate local languages and replace these languages with a dominant language serves an entirely different purpose. Indigenous peoples in general argue that the historic purpose of boarding schools was to assimilate indigenous peoples into the dominant society in which they lived. In the United States for instance, children were forcibly removed from their homes; in order to become civilized they would have to lose their Native cultures. These practices were long supported by anthropological theories of cultural evolution, putting forth a unilinear cultural development from primitive (read: indigenous) to civilized (read: modern western cultures).

### *On the relationship between language and ecosystems:*