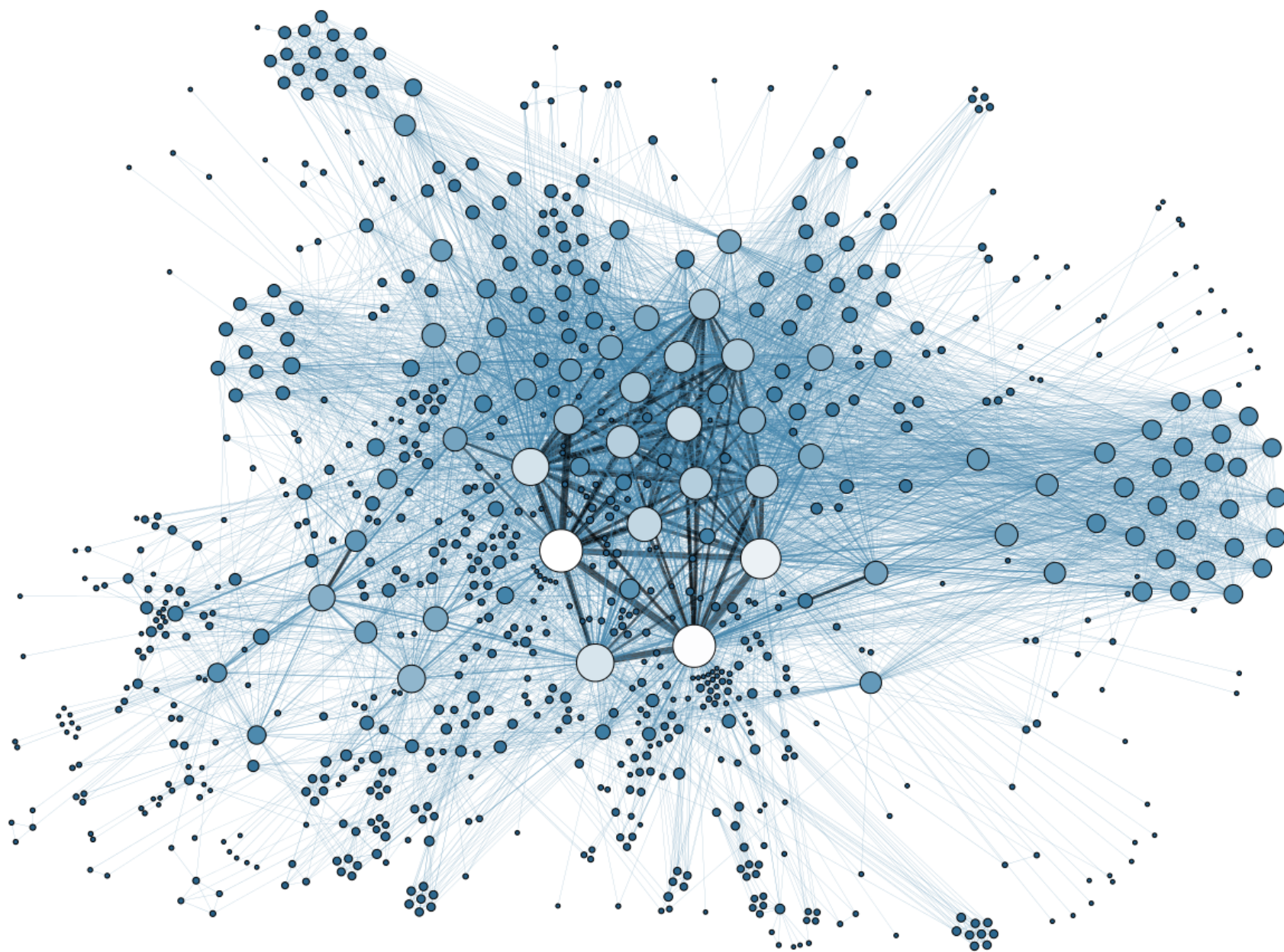


What Is SNA -- Again?

How it could be used in education?

Bodong Chen

What do people mean by SNA?



- Density
- Centrality
- Structural equivalence
- Distance
- Clique
- Reachability
- ...

Social network analysis - centrality parameters and individual network positions of agonistic behavior in pigs over three different age levels

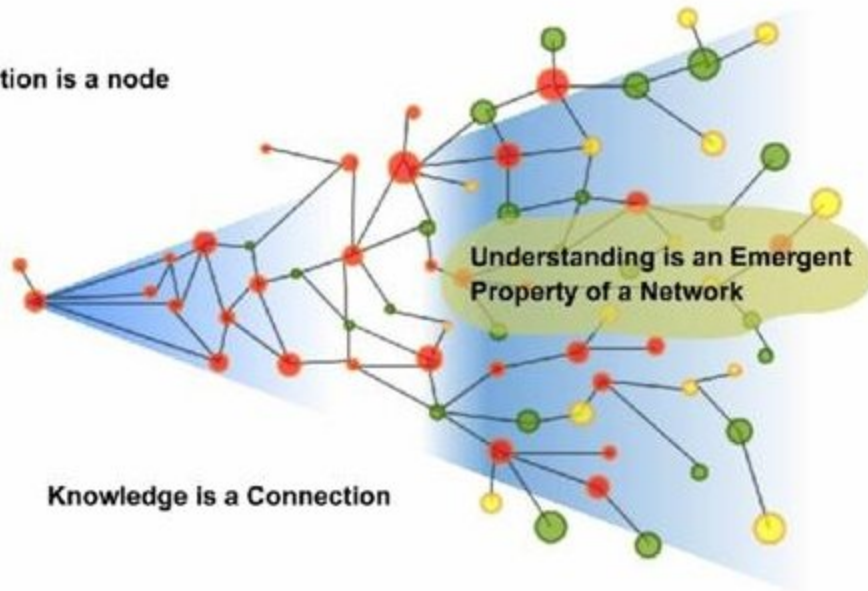
Kathrin Büttner*, Katharina Scheffler, Irena Czycholl and Joachim Krieter

Abstract

Knowledge of the network structure of agonistic interactions helps to understand the formation and the development of aggressive behavior. Therefore, video observation data of 149 pigs over three different age levels were investigated for 2 days each directly after mixing (65 groups in the rearing area, 24 groups in the growing stable and 12 groups in the breeding stable). The aim of the study was to use network analysis to investigate the development of individual network positions of specific animals and to determine whether centrality parameters in previous mixing situations have an impact on the future behavior of the animals. The results of the weighted degree centrality indicated that weaned pigs had a higher fighting intensity directly after mixing compared to growing pigs and gilts. Also, the number of different opponents (degree centrality) was higher compared to the older age groups. The betweenness centrality showed relatively small values and no significant differences between the different age levels, whereas the closeness centrality showed high values at all observed age levels. Experiences gained in previous agonistic interactions had an impact on the centrality parameters in subsequent mixing situations. It was shown that the position of individual animals in agonistic interaction networks can be characterized using social network analysis and that changes over different age levels can be detected. Therefore, social network analysis provides insights into the formation and evolution of behavioral patterns which could be of particular interest for the identification of key factors with regard to abnormal behavior (e.g. tail biting).

Keywords: Agonistic behavior; Pigs; Social network analysis; Centrality parameters

Information is a node



Knowledge is a Connection

Connectivism learning theory (Siemens)

Three Levels

P

philosophy, worldviews, paradigms

M

methodology

m

methods/techniques

Qual vs. Quan

or

Mixed

Research Questions