THE DYNAMICS OF CULTURAL INFLUENCE NETWORKS

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Individuals acquire organizational culture through socialization and it is well understood how socialization occurs as a result of peer pressure and other influence tactics. But understanding the on-going processes by which members new to a formal organization become enculturated requires consideration of at least two additional factors: organizational demographics and influence networks.

First, the demographics of organizational membership determine not only who is around in the organization to exert influence but also the extent to which organizational culture is itself stable. It is obvious that organizational members come and go and that average tenure levels will affect the socialization of others, but the structure of the tenure distribution is also important. If the tenures of members overlap greatly, then culture is likely transmitted across time with ease. As tenure overlap diminishes, then a more intense influence mechanism is likely needed for cultural transmission.

Second, the structure of influence patterns within the organization affects the intensity of socialization pressures experienced by individuals (in contrast to the more typical assumption that all individuals have equal influence on one another; see Scott, 1991; Friedkin, 1998). The location of an individual within an influence network, the characteristics of others in the network, and the influence of each network member combine to produce socialization intensity. Over time, the system also possesses high feedback: one's participation alters the influence network and affects the characteristics of others.

In a recent paper (Harrison and Carroll, forthcoming), we built on a previously established demographic model of organizational culture and its transmission over time (Harrison and Carroll, 1991; Carroll and Harrison, 1998) to incorporate person-by-person influence networks. Most network-based models of influence rely on binary representations of influence or tie strengths among individuals in a group or organization. These models also typically contain fixed, or at least exogenous, influence processes. By contrast, the model we developed represents influence with continuous variables and posits an endogenous process of influence change over time. Both of these features are highly attractive in our view because we think they reflect realistic assumptions about the processes involved in the formation and transmission of organizational culture.

Using computer simulations, we investigated a variety of dynamic interaction principles imposed on the influence network, drawn from theory and research about social cohesion, influence processes, and small group dynamics. In particular, we examined the effects on the enculturation of organizational members of random versus

cohort-based assignments of initial individual influence coefficients (where social influence is a function of proximity in hiring dates; see Pfeffer, 1983), size of peer group, rate of turnover, and inequality of influence in the network.

With respect to influence networks, we found that greater inequality of influence generally lowers cultural variability within the organization. However, we also found that when a single individual has very high influence, cultural variability increases (after controlling for the overall structure of influence).

In this paper, we extend our recent work by explicitly examining how the influence network changes over time. Of specific interest is network inequality, measured in two ways. The first is an overall inequality measure, computed as the average of the difference between the individual with the highest net influence (average influence on others less average influence of others on him/her) and the individual with the lowest net influence. The second is a measure based on the individual who has maximum influence on others; this measure is calculated as the ratio of the average influence on others of the individual with the greatest influence to the average influence on others for the full organization. In both cases, the higher the score, the greater the inequality in the influence network.

Again using computer simulations, we examine the effects on network inequality over time of factors that can be characterized as primarily demographic in nature: turnover rates, hiring processes, and organizational size. We also examine the effects of cohort-based influence processes, where individuals entering the organization near the same time will have stronger influences on one another, and of the organization's enculturation distribution.

References

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