Science tries to capture and fixate the general into models. Models are simultaneously secondary instruments and outcomes of science. But science cannot be understood without the sensitive link of transmission and translation of scientific models into secondary instruments of work or other productive practice outside science. (Engeström 1987)

Yrjö Engeström is probably the most influential Activity Theorist today, working from his Center for Activity Theory and Developmental Work Research in Helsinki, where the central concerns are education, training and work organization.

Engeström’s classic work, “Learning by Expanding” (1987) began with a penetrating critical review of the competing currents of psychological and social theory at the time. This included “the semiotic and epistemological lineage from C. Peirce to K. Popper; the lineage from the symbolic interactionism of G. H. Mead to modern interactionist developmental psychology; and the lineage of cultural-historical psychology from Vygotsky to Leontyev.” His review of Soviet Activity Theory included an examination of the various units of analysis, leading up to the conception which has been the hallmark of his work and that of his followers ever since, the ‘expanding triangle’.

Engeström’s comprehensive schema of nested triangles tackled a lot of the problems in Leontyev’s model. He begins with the natural model of the activity of social creatures, represented with a triangle, in which an individual’s relationship to their environment is mediated by their community. This makes a three-way relationship of mutual mediation, as the community’s relationship with its environment is mediated by individuals and the individuals’ relationship with their community is mediated by the environment.

The specifically human form of life then develops through the mediation of each of these three relationships:

- The individuals’ relationship with their environment opens up as the direct relationship with nature is mediated by emergent tool
use and tool making underlying a system of production mediating between needs and their satisfaction.

- The relationship of the entire community to the means satisfying its needs opens up with the direct relationship being replaced by a division of labor with a system of distribution of the products of labor.
- The direct relationship of the individual to the group gives way to the emergence of larger and more complex communities and social relationships mediated by norms, rules and traditions, including the exchange of products on the market.

The combination of production, distribution and exchange are then mediated by a system of social consumption of the products of labor. Thus, we have Engeström’s famous expanding triangle of triangles (1987) representing the relationship between an individual and their natural and social environment. The relationship between the individual subject and their object (the means of satisfying their needs) is now subject to multiple lines of mediation. Each implementation of this schema produces an outcome which is a changed relationship of all the factors, and each of the mediating links contains contradictions, the mediation of which generate further lines of development.

We see here classic markers of Activity Theory, with the satisfaction of needs of individuals providing the motor of individual activity and development. But Engeström does not refer to this schema as a unit of analysis, but rather the ‘root model of human activity’. The derivation of the ‘root model’ is introduced by specifying four criteria:

*First*, activity must be pictured in its simplest, genetically original structural form, as the smallest unit that still preserves the essential unity and quality behind any complex activity. *Second*, activity must be analyzable in its dynamics and transformations, in its evolution and historical change. No static or eternal models will do. *Third*, activity must be analyzable as a contextual or ecological phenomenon. The models will have to concentrate on systemic relations between the individual and the outside world. *Fourth*, specifically human activity must be analyzable as culturally mediated phenomenon. No dyadic organism-environment models will suffice.

(1987)

The first of the above criteria clearly indicates that Engeström is continuing the search for a unit of analysis as the starting point for a science, but he never actually makes this claim, and indeed will deny