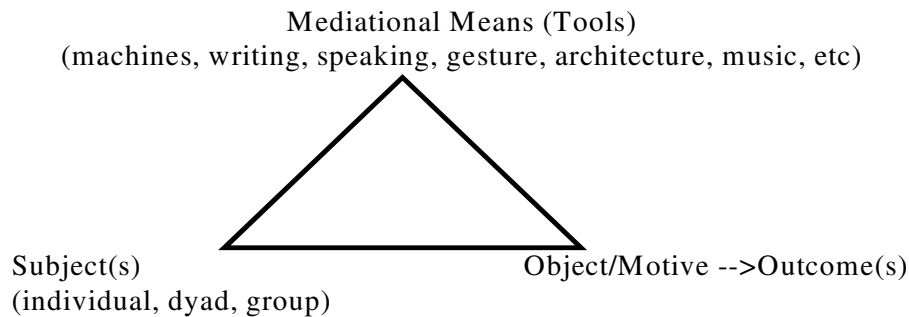


Engeström's (1999) outline of three generations of activity theory

The first generation

Figure 1 First generation activity theory model



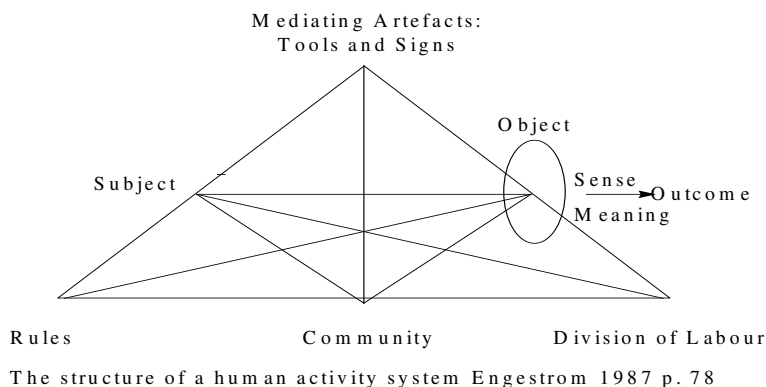
1

This first approach drew heavily from Vygotsky's concept of mediation. This triangle represents the way in which Vygotsky brought together cultural artefacts with human actions in order to dispense with the individual/social dualism. During this period studies tended to focus on individuals.

The second generation

Here Engeström advocates the study of artefacts 'as integral and inseparable components of human functioning' but he argues that the focus of the study of mediation should be on its relationship with the other components of an activity system (Engeström 1999) p.29.

Figure 2. Second generation activity theory model

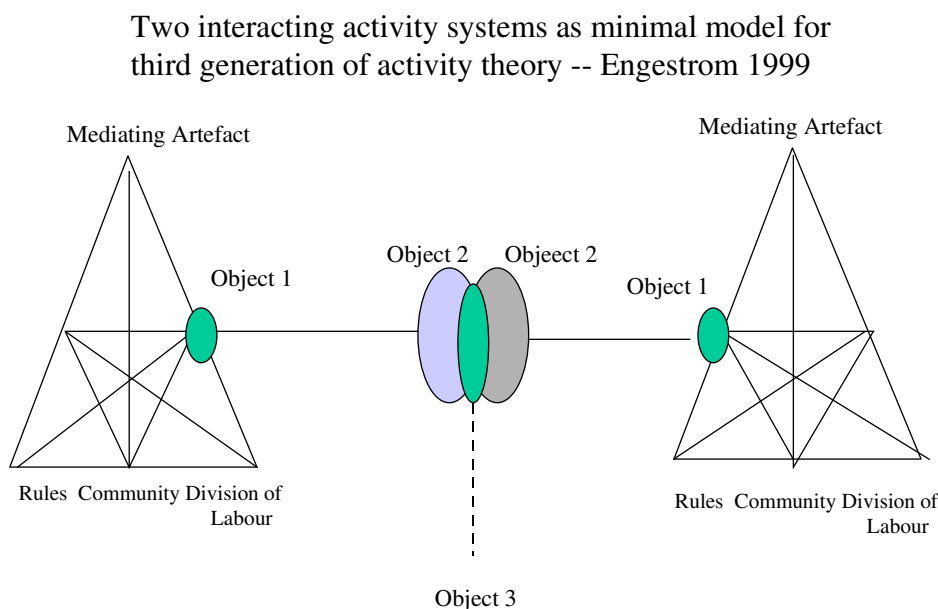


In order to progress the development of activity theory Engeström expanded the original triangular representation of activity to enable an examination of systems of activity at the macro level of the collective and the community in preference to a micro level concentration on the individual actor or agent operating with tools. This expansion of the basic Vygotskian triangle aims to represent the social/collective elements in an activity system, through the addition of the elements of community, rules and division of labour while emphasising the importance of analysing their interactions with each other. In figure 2 above the object is depicted with the help of an oval indicating that object-oriented actions are always, explicitly or implicitly, characterized by ambiguity, surprise, interpretation, sense making, and potential for change.(Engeström 1999) At the same time Engeström drew on Ilyenkov (1977, 82) to emphasise the importance of contradictions within activity systems as the driving force of change and thus development.

Third generation

Engeström (1999) sees joint activity or practice as the unit of analysis for activity theory, not individual activity. He is interested in the process of social transformation and includes the structure of the social world in analysis, taking into account the conflictual nature of social practice. He sees instability, (internal tensions) and contradiction as the ‘motive force of change and development’ (Engeström 1999 p.9) and the transitions and reorganisations within and between activity systems as part of evolution; it is not only the subject, but the environment, that is modified through mediated activity. He views the ‘reflective appropriation of advanced models and tools’ as ‘ways out of internal contradictions’ that result in new activity systems (Cole and Engeström 1993) p.40.

Figure 3. Third generation activity theory model



The third generation of activity theory as proposed by Engeström intends to develop conceptual tools to understand dialogues, multiple perspectives, and networks of interacting activity systems. He draws on ideas on dialogicality and multivoicedness in order to expand the framework of the second generation. The idea of networks of activity within which contradictions and struggles

take place in the definition of the motives and object of the activity calls for an analysis of power and control within developing activity systems. The minimal representation which figure 3 provides shows but two of what may be a myriad of systems exhibiting patterns of contradiction and tension.

Engeström (1999) suggests that activity theory may be summarized with the help of five principles. They stand as a manifesto of the current state of activity theory:

‘The first principle is that a collective, artifact-mediated and object-oriented activity system, seen in its network relations to other activity systems, is taken as the prime unit of analysis. Goal directed individual and group actions, as well as automatic operations, are relatively independent but subordinate units of analysis, eventually understandable only when interpreted against the background of entire activity systems. Activity systems realise and reproduce themselves by generating actions and operations.

The second principle is the multi-voicedness of activity systems. An activity system is always a community of multiple points of view, traditions and interest. The division of labour in an activity creates different positions for the participants, the participants carry their own diverse histories, and the activity system itself carries multiple layers and strands of history engraved in its artifacts, rules and conventions. The multi-voicedness is multiplied in networks of interacting activity systems. It is a source of trouble and a source of innovation, demanding actions of translation and negotiation.

The third principle is historicity. Activity systems take shape and get transformed over lengthy periods of time. Their problems and potentials can only be understood against their own history. History itself needs to be studied as local history of the activity and its objects, and as history of the theoretical ideas and tools that have shaped the activity. Thus, medical work needs to be analysed against the history of its local organization and against the more global history of the medical concepts, procedures and tools employed and accumulated in the local activity.

The fourth principle is the central role of contradictions as sources of change and development. Contradictions are not the same as problems or conflicts. Contradictions are historically accumulating structural tensions within and between activity systems. The primary contradiction of activities in capitalism is that between the use value and exchange value of commodities. This primary contradiction pervades all elements of our activity systems. Activities are open systems. When an activity system adopts a new element from the outside (for example, a new technology or a new object), it often leads to an aggravated secondary contradiction where some old element (for example, the rules or the division of labor) collides with the new one. Such contradictions generate disturbances and conflicts, but also innovate attempts to change the activity.

The fifth principle proclaims the possibility of expansive transformations in activity systems. Activity systems move through relatively long cycles of qualitative transformations. As the contradictions of an activity system are aggravated, some individual participants begin to question and deviate from its established norms. In some cases, this escalates into collaborative envisioning and a deliberate collective change effort. An expansive transformation is

accomplished when the object and motive of the activity are reconceptualized to embrace a radically wider horizon of possibilities than in the previous mode of the activity. A full cycle of expansive transformation may be understood as a collective journey through the zone of proximal development of the activity.

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