Activity theory

Basic concept of activity theory in relation to HCI studies
Origin of Activity theory (AT)

• AT originated within Soviet psychology in 1920s by its roots from the cultural – historical school founded by Vygotsky.

• Further founded as Activity theory by Leont’ev and his students (Leont’ev 1974).

Concept of Activity

• Activity as the basic unit of analysis
  – Mediated relationship at the individual level, see figure 1.
  – Activity in context as the basic structure of an activity, see figure 2.

Figure 1: Structure of an individual, mediated action

Figure 2: The basic structure of an activity
Concept of activity

• The basic idea is that there exists a “fundamental type” of context, which is called an activity.
• It is meaningless to study a HCI in-situ without the basic context if aiming to grasp the essence of a phenomenon.
• An activity is not given or static, but rather dynamic as its changes and develops over time.
• An activity has an active subject (actor), who understands the motive of the activity. This subject can be individual or collective.
• An activity has an object and activities can be distinguished according to their objects.
• The relationships within an activity are culturally mediated.
Concept of activity

- The central relationship within an activity is between the subject and the object. Additionally has Engeström (1987) expanded the activity by adding a third component, *the community*, to better capture the subject’s context more explicitly. Thus two new relationships are formed; subject-community and community-object.
- The relationship between subject and object is mediated by tools i.e. technology.
- The relationship between subject and community is mediated by rules i.e. laws and regulations, norms etc.
- The relationship between object and community is mediated by the division of labor i.e. negotiations of distribution of tasks, power relationships and responsibility.
- Each of mediating terms is historically formed and open to further development.
# AT versus ANT

<table>
<thead>
<tr>
<th>Theory</th>
<th>Concept</th>
<th>Unit of analysis</th>
<th>Applied within IS – research field</th>
<th>Agency</th>
<th>Localization</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT</td>
<td>Actor, humans and non-humans included as a heterogeneous network</td>
<td>Translations, negotiations</td>
<td>Socio-technical studies, i.e. health studies such as hospital studies</td>
<td>Humans and non-humans, symmetrical</td>
<td>Networks</td>
</tr>
<tr>
<td>AT</td>
<td>Motivated human activity</td>
<td>Activity system</td>
<td>HCI</td>
<td>Humans as individuals, aggregated individuals or as a collection of humans</td>
<td>Activity systems</td>
</tr>
</tbody>
</table>