Activity Theory & Eight-Step Model

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Outline

- Why the 8 step model?
- Why theories in Human–computer interaction (HCI)?
- Why considering context?
- Activity Theory & Examples



Why the 8 step model?

It Consists of 8 questions that offer a chance to discuss and reflect on different aspects of our projects.

- What sort of activity am I interested in?
- Who is involved in carrying out this activity?
- Why is the activity taking place?



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Engeström's activity system model (Kaptelinin and Nardi, 2012)



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- E.g. Feminist HCI:
 - Have we considered the needs of minority or marginalized groups?
 - Does our system consider gender equality in its design?





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Example:

- Ordering button





- The design process centers on the button's
 - size,





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 - size,
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- The design process centers on the button's
 - size,
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 - placement,
 - and responsiveness.







Context: Clicking to order a Pizza 🍕 , motive: being hungry

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Problems:

- A narrow view on human beings, little understanding of social context, emotions, etc.



- Activity Theory in HCI, adapted from the social sciences, to support designers in **integrating meaning and context** into the design of interactive systems.
- Focusing on the motivations, goals, and tools that shape the interactions.
- Originating from the socio-cultural tradition in Soviet/Russian psychology,
 - The theory was founded by, Vygotsky and Leontiev



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- Subjects have needs, to survive, must carry out activities
- That is, interact with **objects** of the world to meet the needs.





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Engeström's activity basic system model

- Community
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Engeström's activity system model

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SUBJECT

OBJECT

COMMUNITY





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Mediation, people use technology (tool) to achieve their meaningful goals







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The subject and community of activity **mediated by rules**



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E.g., **GDPR**, Data Protection Regulation

IMEĂ

IVERSITY





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- (a) tools/instruments for the subject-object interaction
- (b) rules for the subject-community interaction,
- (c) **division of labor** for the community-object interaction. (Kaptelinin and Nardi, 2012)



the object and community of activity **mediated by** division of labour





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Who does what!





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Division of labour: Coordination with the work of other team members is achieved by employing a division of labor.





Example2 - An Activity Theory Analysis of Search & Rescue (Alharthi et al., 2021)





Regarding the questions

- Our goal is not to do an activity theory analysis of the projects
- It is just to help you actively think and discuss different aspects of your projects by considering the context of your work



References

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- Analyze a Case Using the 8-Step Model: Apply the 8-step model from Activity Theory to a given case. Address each of the eight guiding questions in the model specifically related to your assigned case.
- Create a Persona: Based on your analysis, develop a persona that represents a key stakeholder or user involved in the case. Decide which fields or attributes (like goals, frustrations, background, etc.) to include in the persona.
- Write a Reflection: Provide a short explanation on why you selected the specific fields for your persona. Discuss how these fields represent the persona in the context of the analyzed activity and communicate relevant aspects of their experience and perspective.



Thank You!

