



Intention and Motive in Information-System Design

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Applying Activity Theory to CSCW Research and Practice
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The Connected Kids Information System

1. A youth-services information system for the City of Troy, New York, with an Oracle database and a WWW interface, demonstrated at Troy City Hall, 9 and 11 September 2003
2. Developed by computer-science and communication faculty and graduate students at Rensselaer Polytechnic Institute and the University at Albany, SUNY, with funding from the 3Com Urban Challenge Program, the National Science Foundation's Division on Digital Government, and other organizations
3. Designed with and for City of Troy administrators, youth-services organizations, teachers and counselors, parents, children, and teens



Intentions and Motives in Activity Theory

1. *Activities*—oriented toward *Objects*—energized by unconscious *Motives*
2. *Actions*—oriented toward *Goals*—guided by conscious *Intentions*
3. *Operations*—dependent upon specific *Conditions*
4. Cycle of Expansive Learning
5. Communities—Rules—Divisions of Labor
6. Focus groups, participatory-design sessions, etc.
 - a. group discussion, guided by a skillful moderator, as an aid to self-understanding and collective development of ideas
 - b. illustrations and examples as prompts to group discussion
 - c. questions as invitations to descriptions of actions rather than statements of beliefs (i.e., “What do you do?” not “What do you think?”)



Intentions and Motives in the Connected Kids Information System

1. Youth-Services Administrators
 - need for information about events, programs, and services, customizable WWW presence
 - descriptive scenarios of organizations' and clients' perspectives
2. Low- and middle-income parents
 - descriptive scenarios of parents' information wants and needs, articulation of community rules
 - need for sophisticated search and perhaps chat or bulletin board functions
3. Middle- and high-school children and teens
 - descriptive scenarios of children's and teens' WWW activities
 - desire for dynamic and interactive WWW experiences, interest in displays of art work, stories, and photos

Research Questions

1. Are focus groups a viable method of gathering data about system specifications?
2. How can we assess this data to ensure that we accurately and fully understand users' intentions and motives?
3. Can we operationalize activity theory as a method of analyzing users' conscious intentions and unconscious or partially conscious and sometimes poorly articulated motives?

Illustrations from Transcripts

1. Youth-Services Administrator (confirming explicit intentions):

I think it will work well because I think in terms of an agency like [My Organization] where it is so large, and a lot of times, well just in terms of [My Unit] and some of the services that we offer, people just think [My Organization] and have to surf through a number of different links just to get to [My Unit], so it would be nice if we could have a direct link, as well as link back to the whole agency wide site where you know they can gain more information and stuff like that, but it would be nice if we could have that link just so they could know what we're doing in terms of youth programming.

Illustrations from Transcripts

2. Youth-Services Administrator (inferring others' intentions):

Well, is there a way, too, . . . cause a lot, a lot of our recreational services have an educational compo[nent] . . . all of them, actually, do . . . and I wouldn't necessarily want the youth to know that we're doing gang prevention when you're out on the basketball court by the, the ah [a few words inaudible] . . . so I would like the parents to know that, that our [a few words inaudible] is actually a part of our basketball tournament, but I don't want the kids to know that . . . I just want them to know they're playing basketball.

Illustrations from Transcripts

3. Middle-Income Parents (describing activities and rules):

Female Parent 1: I would think that, uhm, comments from other parents would be helpful . . . some sort of reflection on the quality of the program, from their experience . . . because what, I think what parents do is . . . they ask each other . . . [several words inaudible, as several people talk at once] Then you find out. Was it a good experience? There's so many issues related to children being exposed to things that are inappropriate for their developmental level . . . uhm, you know, society is so much edgier, they have so much more access to information . . . a stimulus that really is not acceptable for them to be having access to . . . and so, uhm [several words inaudible] . . . but I think not sometimes, ah, but I think that that's important. What is, what, what is appropriate for what age group might be a good way to screen general [Inter]net, uhm, quality.

Moderator: Uh, huh.

Illustrations from Transcripts

Male Parent 1: I would, I would add to that . . . I agree that, you know, word of mouth seems to be or asking other parents about . . . seems to be important, but I think so much of that is sort of, uhm, is hard to, to sort of qualify because it's sort of like, you, you know, you sort of ask parents who you know maybe have shared the same sort of parenting skills or, or goals that you have, ah, you know, like if you like that camp, then I think it will be good for my daughter because, I know how, you know, I know how you raise your children, so therefore . . .

Moderator: It's pretty subjective . . .

Male Parent 1: Right. It's very subjective, but, I mean, it's sort of like, or, or you, uhm, maybe filter it like if so and so says this about it and, and this one says that about it well, you know, you know, there's issues with this child and parent, there's issues, you know, not issues, but you know, you know what people are like so you sort of gauge your, your, your responses . . .