Contemporary Approaches to Activity Theory:

Interdisciplinary Perspectives on Human Behavior

INTRODUCTION

Expansion is the result of a transition process from actions currently performed by individuals to a new collective activity. A transition from action to activity is considered expansive when it involves the objective transformation of the actions themselves and when subjects become aware of the contradictions in their current activity in the perspective of a new form of activity. In this sense, learning by expanding can be defined as a "thoughtfully mastered learning activity" (Engeström, 1987, p. 210)

I'd like to think that the contents of this book combine soft relational and hard theoretical arguments, qualities and results, all of which characterize aspects of activity theory. Proponents of soft-relational designs like Engeström (1987) focus on individual aspects of activity theory whereas advocates of the hard-theoretical camp like Stetsenko (2005) emphasize the systemic aspects of activity theory. Some questions linger on: What does activity theory contribute to contemporary understanding of development? How do aspects and understandings of activity theory, developmental psychology, action research and anthropology combine? What would be the relations between theory and methodology?

The research community responds to such questions by including contexts, social practices and activity to the overall scheme. Some narrowly defined foci form legitimate responses to Engeström's (2009, p. 303) bold prognosis of the future of activity theory, suggesting application of formative intervention and virtual change laboratory as a developmental methodology. Engeström's direction of study potentially clarifies mechanisms of productive work, health, communication and attitudes with a more attractive focus than does Bedny and Harris' (2005, p.145) criticism of activity theorists who allegedly fail to use "appropriate analytical principles or methods." From a similar negative focus of research, Hodkinson, Biesta and James (2008, p. 137-ff) discard of activity theorists' understanding of a "cultural theory of learning".

Personal experience, shared knowledge and empirical-constructivist approaches to reality suggest people can choose several lines of research. A common denominator for several kinds of "ethnographical studies and research" so far is that proponents of e.g. action research and activity theory study people operating in/on social systems. However, any definition of social science research takes as starting point a specific ontological and epistemological view of man, people, mankind, humanity etc. Also, it is an acknowledged contention that mental functions of thought, communication and learning relate to mental, cultural, social and historical operations based on a rather firm epistemological commitment. At the end of the day, natural language, individual learning and cultural development form sustainable influences on material and spiritual progress.

More specifically still, communicative acts carry with them a textual structure, suggesting "natural contradiction" to appear between language and action. A specific linguistic pattern – for example shaped as an utterance in a book on activity theory – inspires behavior in collectively produced social activities among the authors, editor and readers. Put differently, awareness of what it means to become human starts off as a social quality. It is picked up by attention and interaction with the Other, eventually generating subjective awareness of Self and a civilized personality. One consequence of such transformative phenomenological operations is that developmental human activities are conscious, goal directed and co-operative. But it is a futile ambition to separate between social science theory and developmental practices, be it by ethnography, action research, learning organization,

change laboratory or other. After all, successful outcomes of research presuppose awareness of the workings of a pedagogical process in which balancing of researcher-subject and practitioner-co-subject generates meaning and truth for others to modify, adopt or discard of. In assessing the quality of such research there is a need to consider pedagogical aspects of R&D in terms of deployed means, motivations and objectives of human behavior.

Initially research for developing activity theory was about the psychology of learning. Then ensued transition of knowledge that emerged from studies in laboratories and moving to educational settings in families, at school in society and at workplaces. Focus shifted from teacher behavior to people and organizations carrying out professional work. Today there is continuity of interest in adaptations of activity theory to information technology (ICT).

The content of this book covers developmental approaches to researching and practicing activity theory. Most practitioners and researchers agree that the totality of life experiences define who we are, awareness of how to perceive of the world and the forming of personality traits. Such a perspective covers cultural, psychological, pedagogical, historical and ecological approaches to thinking, behavior and development. A classical divide between singular subjective and structural-collective influences is another defining theme of the book. For the above applies that relations suited to explaining contemporary and past behavior appear between dialectical pairs like agency and instrumentation, like internalization and appropriation, like creativity and convention and like language and intention.

Activity theory and interdisciplinary research has turned out a productive combination solidly positioned between theoretical consideration and applied methodology. The empirical and conceptual sections, chapters and specific choices made by the authors' the book reflect their application and use of analytical tools, logic of inquiry, thorough argumentation and methodological awareness. The content draws on primary research and empirical data distributed between ICT, Education, Work practice, Method and Theory. This rather wide rationale of structured contents covers levels of activity theoretical complexity combined with specific themes, providing a spectrum of basic-elementary and state of the art approaches. The theoretically sound and practically applicable contents illustrate descriptive projects and in-depth analyses of people, settings and activities. Furthermore, the contents cover conceptual studies, theoretical development and appropriation of artifacts.

Some authors discuss the value of present day socio-cultural practices. Others develop concepts and practices by proposing new solutions. There are chapters portraying rarely studied areas of human behavior as an impetus to socio-cultural development. Descriptions of mind and action (Wertsch, 1991, 1998) range over contexts where you are likely to find ICT, education and work. Some authors describe research that unfolds over part, present and future activities. Other chapters contain methodologically sound research in which the authors deploy cultural tools and describe trajectories of individual learning and cultural development. The book provides authoritative background information for deciding on alternative roads of research that enable for creativity, applicability, rigor and motivation.

Information and communication technology (ICT)

Amazingly, most of the scholars committed to either cultural-historical psychology or activity theory do not deal with digitalization. Or at least they underestimate its revolutionary quality and so fail to prove their concepts and methodology. [...] To me, these facts give reasons to ask: Can those automatically and independently functioning technical systems still be called activities or activity systems? (Rückheim, 2009, p. 88; p. 91)

Currently, there is a global need for innovation, change, variety and sustainability in ICT and elsewhere. Market oriented phenomena seem to challenge accompanying stabilizing routines for delivering goods and services. One consequence of the battle between stability

and change is that as new phenomena see the light of day people adopt new ways of working. Engeström (2010, p. 199 ff.) characterizes new forms of working as “fluid organizations”. So ways of acting, thinking and reflecting will emerge. For working life procedures the outcome of the battle between change and stability make up for a major part of current and future employees’ work contents, output and satisfaction.

There are a number of phenomena to study in an emerging world of ICT, e.g. social media, availability of information and netiquette. Rasmussen & Ludvigsen (2009) opt for studies of educational reform. Authors like Barab, et al. (2010) portray videogames and videogame playing as phenomena suited to activity theory inspired analyses. One way of classifying videogaming activity is to establish the use, meaning and effect of affordances “hidden” in rewarding interactions which tend to appear during game-playing. In several of those games the players engage in transactions and take on a variety of roles. They act as author (source inspiring action), as performer (causing consequences) and as audience (object of reflection). From a research point of view authors define game-playing as dramatic narrative, because game-playing experiences unveil the players’ values, ideological contradictions and moral thinking. At other times we define videogames as curricular drama e.g. if used for educational purposes. Based on such considerations Barab, et al. (2010) model and study ICT-environments aiming at integration of the above moral dimensions with analytical activity theoretical concepts. They describe game playing in terms of a social community with a shared purpose (objective) in mind. The agents’ (subject) of their study initially form one direction of work; another direction covers legitimacy of the content (object); a third direction contains manipulation of the context (developmental change) that ultimately affects the players’ objectives, experiences and actions.

In another study which lies outside a tradition of mainstream activity theory Friesen (2009) focuses on the players’ cognitions as analyzed and understood by oral-written-verbal rather than gaming operations, acts, interactions and exchanges. Contingent social and discursive ICT-activity defined as transformation by means of natural language is a relevant focus of study at least if compared to old school man-machine (HCI) interactions. Similar to game-playing approaches to activity theory, conversations and discursive practices in social media qualify as phenomena worthy of research. Friesen’s (2009) activity theoretical approach builds on an objective to apply discursive psychology to his analyses. One conclusion of such studies is that the chosen medium constrains the quality or rather exchange value of web-based interactions simply because they are limited by the digital design. Suchman (2007) says virtual interactions are asymmetrical with low exchange value because of the flexibility of the system and the agent’s responsibility to safeguard against ethical controversies. And also, the quality of interactions are decided by the actual culture which the player/student brings into the exchanges. The conclusion is that socio-cultural objectives, circumstances and activities verify to the importance of applying an activity theoretical perspective on ICT-related phenomena.

Nardi (2007) suggests collaboration, transformation and learning in “placeless” organizations as a productive ICT theme to study. The argument for focusing on context rather than collectively shared activity as the object of study is that people organize and behave differently in real life exchanges than they do in virtual worlds. For example, they transform practices differently by means of ICT than they do in real life situations. According to Nardi (2007, p. 5) a problem related to current activity theory approaches to ICT is that “the cultural-historical dimensions of activity have been under-theorized [...] much less elaborated than the formal principles.” According to Nardi, activity theory viewed from a cultural-historical perspective on ICT should study, describe and explain social change, co-construction and instantiation of ways of managing virtual activities plus attaining objects by

means of individual action. In the best of worlds placeless ICT-driven organizations become fluent contexts – or fluid organizations – which reinforce social transformation. Such organizations, interfaces and activities support collaborative learning.

Education

I am for practicing psychologists, for practical work, and so in the broad sense for boldness and the advance of our branch of science into life. L.S. Vygotsky (Quote in Leontev & Luria, 1968, p. 367)

Several epistemological and philosophical assumptions apply for general activity theory. One assumption relative to education, instruction and teaching and learning suggests that cognitive development equals acquiring of cultural traditions, behavior and ways of thinking. Another assumption related to teaching and learning is that human psyche and the material world exist prior to the birth of human beings as an empirically given cultural-historical quality. Third, language and relations between subject and object mediate higher mental functions. Four, the functional use of language presupposes an agreed set of socially agreed developmental meanings. Five, the power of collective activity brings forward behavior in individual subjects which eventually manifest as social institutions by internalization of contemporary culture.

A line of theoretical development related to educational practices begins with Vygotsky, suggesting Zone of Proximal Development as a basic concept for understanding teaching and learning plus development of higher mental functions. Shayer (2003) supplies a rare example of negative criticism against Vygotskian theory. Then there are relations between learning and development to follow by arguments on mediation, construction/evolution and use of artifacts. Finally there is application of concepts, signs and psychological instruments. Several activity theory proponents take on board narrowly defined foci on human development and behavior. For example, Leontev introduces activity, needs and motive plus a model for structuring the concepts. Davydov analyzes motives of learning in exploration of theoretical relations saying successfully completed tasks reinforce learning and motivation. Engeström picks up on definitions of activity, characterizing concepts as generators of emerging contexts, implying that e.g. school management, teachers and students actually construct a shared context.

Classrooms are laboratory-like contexts offering conditions for intervention, analysis and change of pedagogical practices and learning outcomes. Also, there are ethical, normative and value-laden aspects of cultural-historical development, schooling and education (Cole 2010) to consider. Contemporary formal education offers identifiable objectives and activities of teaching and learning. Studies into educational practices enables for understanding of similar activities like therapy, evaluation, grading and examination. Regardless of objective, subject, curriculum, culture or nationality, educational research benefits from studies of classroom behavior among students and teachers. Action research practices and general activity theory shaped as Change Laboratory, Clinic of Change, developmental work research (DWR) or Interactive Research (Svensson, Brulin & Ellström, 2002) benefit from studies in classroom settings, especially if deployed as a Vygotskian laboratory for evaluating the explanatory potential of zone of proximal development, socially constructed knowledge, individual support and scaffolding. By bringing motivation into analyses of education, Hedegaard (2012) provides a complementary view on educational practices. In her context, it matters little if we label context and research object as setting, scene, environment, stage, institution, organization or activity.

A child's life always involves participating in a concrete institutional practice realized by activities and interactions among multiple participants, in recurrent everyday settings; at the same time the child's activity in a concrete practice can be conceptualized from three different planes. (p. 129)

Hedegaard's (2012) model includes a formal societal plane on historically evolving traditions, an institutional plane on conventional routines and a narrowly defined plane applicable for any institution. By focusing on educational practices Hedegaard's model of learning builds on key concepts like *activity* and *setting*, including societal influences, cultural tradition, contextualized (home, school, daycare) practices and individual motives.

Rose (2012) provides another example of activity theory applied to US-vocational education. This ethnographic study verifies to the flexibility of activity theory for dealing with types of written data plus analysis of educational practices and contexts. In order to illustrate the span of approaches to activity theory and education, Vandebocoeur and Collie's (2013) activity theoretical perspective on education applies for social and emotional learning. For research purposes, the authors use concepts like *mediation*, *unity*, *unit of analysis*, *word meaning*. The specific focus of their article on *perezhivanie*, translates as "emotional experience".

These contemporary references have a clear focus on the abstract-theoretical side of learning and development. Based on direct experiences, however, every teacher, pedagogue, mentor, instructor, actor or master holds that education is a practical business. Their experiences imply that the teacher's plan has got to work, i.e. the students must accept the teacher's objectives, planning and performance – in the classroom. Vygotsky (1997) defines schooling contexts as situations for people to explore accumulated and culturally shared knowledge. According to Vygotsky, schools provide curricula that link everyday verbal knowledge with the proper use of abstract concepts to support aspired deep learning. Furthermore, school contexts offer starting points for authentic problem solving and assessment of learning. Any educational design for studying education, teaching and learning, instruction etc. should contain an account of how-processes related to what-outcomes. Also, teachers act out the double roles of academic expert and social actor. In the lucky cases, the teachers' commitment brings cultural development for individual students and collective societies.

Yet another line of developmental work and research (DWR) in education focuses on adult learning, societal conditions and organizational development. Such initiatives offer a complementary approach to educational studies. The chronological continuity of practical-pedagogical work processes of teaching and learning in such "programs" consists of a mix of Senge's (1990) and Engeström's (1987) conceptualizations of learning organizations. The approach includes studies of collective object of activity and performance in teams. The authors' respective approach cover a comprehensive heap of systemic concepts and processes, conceptual models, leadership, systems thinking, shared visions, personal mastery, evaluation, documentation and publication.

This account of activity theory studies into education suggests a fragmented picture. In adhering to an activity theoretical paradigm in educational research the first day of a university course should cover learning by intervention, teamwork, development and change. Such an introduction includes several stages. They are presented as chronologically organized must-do operations. Valid teaching starts off with (a) the lecturer's introduction; (b) presentation of the pedagogical design, (c) clarification of course objectives, (d) delivery of a presentation of the participants. Before long, there is (e) analysis of what is meant by *activity* and *development*, (f) understanding of holistic thinking and scrutiny of Senge's (1990) disciplines for organizational learning. After lunch there is (g) a presentation of the course literature; (h) explanation of the significance of attitude, awareness, ability and skills for those who contribute to positive development plus (i) presentation of interplay between structure-system and person-profession. After coffee, there is work in teams aims on (j) learning prominent arguments in support of the team members' choice of organization, institution,

activity or practice for further study. This is a crucial step because the students will have to pursue their learning object/object of activity for the rest of the term. There will be (k) lessons on Vygotsky, Leontiev, Luria, Davydov and Engeström, clarifying instrumentation, learning, systems thinking and germ cell modeling. The next day the students (l) present an attempt at activity theoretical analysis of their provisional/tentative project by circular and triangular models of development and analysis. At the end of the day the students (m) present the results of their work in learning teams including an account of purpose, objective, internal working procedures and planning of shared activity in the studied company, organization, industry, activity. Further analysis of (n) the impact of personal ability is accompanied by (o) presentation of the circular model by historical analysis, present situation and construction of new instruments. The students report on (p) the steps they have taken for changing the studied activity. After lunch the students (q) continue work in teams, interpreting homework and asking who has been doing what. They (r) summarize progress in a big group meeting before ending the second day activities.

For the referred (a-r) course on reading-understanding and doing-performing in a developmental activity, there are theoretical and practical consequences to consider. First, there is opportunity for integration between traditional school work assignments like reading course literature, innovative interaction in learning teams plus individual initiative for change based on the needs and opportunities outside traditional educational practices. Find an example relating to the steps that students/team members adhere to as they form a necessary, crucial and proper problem statement. Social science studies of essay writing usually start off with a problem description. Before the learning teams define and solve their combined practical and theoretical problem, they benefit from the university teacher's instruction, guidance and support. Work begins with a mapping of all the practical problems they can possibly imagine. Then the teams decide on a particular problem. Included in their provisional problem statement are prospective solutions to solving natural contradictions. By discussing their choice of activity for further study and intervention, the learning teams delimit and/or reformulate the problem so they can conduct and benefit from an empirical study. They summarize, condense and document the result of their study. But before moving on with the chosen theme they adjust their problem statement. Drawing a time-schedule and a work plan plus preparing for note-taking and signing agreements finalize work in the teams on forming a functional problem statement.

Another example of practical team working among students (in higher education) covers steps for reaching conclusions. For drawing valid conclusions about a studied activity system, the learning teams follow consecutive steps on a ladder of sense-making. They learn to observe relevant data and share experiences; choose relevant data; interpret the data; make assumptions based on ascribed meaning; draw conclusions about the studied activity; form convictions about the world and act on their convictions. They must pass through these steps in their attempts at change and development of a studied activity.

Work practice

Social capital is a collective good, not the private property of those who benefit from it. I take a sociocentric view on that focuses on what makes communities work. In other words, I search for factors that enable collective actors to sustain themselves, to perform beyond routine expectations, and to reorganize themselves when needed. [...] I suggest that social capital is firmly rooted in and practically inseparable from certain types of tangible material structures and artifacts – including the materiality of human beings as bodily actors. (Engeström, 2008, p. 169)

Modern psychology used to be a Soviet-Russian discipline and workplace learning originally turned into a favoured Nordic theme. Find titles and disciplinary focus on development of workplace learning for twenty years (1979-1997) in Sweden: *Work* (history), *How do you feel at work* (psycho-social environment), *The workplace* (management),

Competence (organizational development), *Work oriented design of computer artifacts* (system development), *The practical intellect* (computers and professions), *Learning at work* (applied psychology), *Man at work* (work environment), *Tacit Knowledge* (health care), *The Toolbox* (cultural perspectives on work).

Other lines of research on work practices respond to overarching questions like who is acting in an activity system (Engeström, 2009) and approaches for identifying impact of Self on/in activity systems (Stetsenko & Arievidt, 2004). There are other examples related to the pursuit of evolving objects and even critical voices of activity theory (Martin & Peim, 2009; Bakhurst, 2009). Another line of research relates to the fact that original activity theory first and foremost covers theory. In spite of this fact, contemporary researchers (Foot, 2002) translate activity theory as an empirical method for managing organizational development. Engeström (2009) provides a valid response to Martin & Peim's (2009, p. 131) criticism of "ambivalence over conceptualizations of agentic action" in research of informal learning.

This section of the book covers activity theory related to transformation of work practices, the birth and management of evolving activity systems and weighing of influences on communication, transformation, production and consumption of goods and services. In many examples of activity theory research and development researchers address notions of agency, structure and power operating in large-scale predominantly social rather than industrial structures. In arguing a case for organizational-institutional structures, activity theoretical research needs to draw a clear line between legitimate macro-social (sociology) and illegitimate political (politics) issues. Also status, power, personality plus antagonisms need to be separated from legitimate research on natural contradictions.

By the sheer "nature of things" people seem to assume that routines, products, activities and thinking evolve at a steady pace. This is a globally held contention of progress implying that regardless if spontaneous or planned interventions behaviors form a deviation from what Mother Nature intended about developmental activity. Blasphemy, violation of rules and risk-taking are some of the expressions we use for (dis)connected, (ab)normal and (in)frequent steps that people seem to take at a regular but infrequent basis. Our belief in and support of planned, slow, controlled and steady progress by means of stability rather than innovation is the reason why CHAT-approaches, action research, change laboratory, clinic of activity (Clot, 2009) – well, even problem based learning, consultancy, in-service and lifelong learning - appear as productive approaches to social science. This is true only if compared to hypothesis testing research on quantitative data and natural science traditions of using theory (for interpreting data).

Sudden and surprising deviation from a given norm rarely equals development. At times incremental transition from one stage to another seems to block positive development. The colloquial expression on how to understand and relate to change and development is "why fix it if it isn't broke? In spite of such Platonic (Taleb, 2007) arguments, and contrary to a generally held contention that progress is slow and predictable, Vygotsky (2004, p. 10) suggests that in improving learning for children, the teacher "imagines, combines, alters and creates something new." Especially on change and understanding related to creativity among employees and researchers, Vygotsky (1994, p. 276) says: "For the first time the formation of concepts brings with it a release from the concrete situation and the likelihood of a creative reworking and transformation of its elements." One might add to the quote, serving as an instrument for sharing an understanding the interplay between theory and practice. Kurt Lewin allegedly described the positive double-bind situation meshed in individual learning processes saying there is nothing as rewarding to development of theory as a good practice and nothing more developmental to an existing practice than a sound theory. According to a contemporary author, Worthen (2008, p. 322) suggests there are generous contemporary

contexts and activities for doing so: “a grocery warehouse, steel mill, cleaning company, federal office, an apartment building, public school, and musical instrument factory.”

In studying development of work practices through past, current and future innovation, deviation from a norm and dynamic contradiction, there are theoretical and practical approaches to consider. Ellis (2011) mentions scientific concepts that characterize methods for improving theory as well as work practices: *informed-, formative-, developmental-, practice-theory-developing intervention, practitioner and participatory inquiry, reflective practice, activity development and learning plus double stimulation strategy*. Additional examples include on *the job training programs, labor education, and community of practice* (Wenger, 1998). On individual learning defined as change that influences ways of understanding collective development, Roth and Lee (2007) argue.

Learning occurs whenever a novel practice, artifact, tool or division of labor at the level of the individual or group within an activity system constitutes new possibilities for others (as resource, form of action to be emulated) leading to an increase in generalized action possibilities and therefore to collective (organizational, societal, cultural) learning. (p. 205)

For Lee and Roth (2008) systemic change and development is a dedicated area of research. So is research on relations between individually and collectively controlled plus culturally and historically evolving behaviors. There is change and development to study within specific here- and-now (space and place) activity systems and there are opportunities to study behavioral patterns in socio-cultural practices. During processes of change, patterns of behavior seem to appear in activity systems and in people. Old contingencies which used to influence and control organizational routines and human behavior seem to fade away with the establishment of research on new work patterns. Laclau (1990) comments on the functionality of behaviors in the operating of effective activity systems, concluding a proposition that contingent conditions of emerging patterns, solutions and behaviors decide how we identify, analyze and understand work practices.

Methodology

We could review all the opinions offered to explain why an open controversy closes, but we will always stumble on a new controversy dealing with how and why it closed. We will have to learn to live with two contradictory voices talking at once, one about science in the making and, the other about ready made science. The latter produces sentences like ‘just do this ... just do that ...’ the former says ‘enough is never enough’. The left side considers that facts and machines are well determined enough. The right side considers that facts and machines in the making are always **under-determined**. (bold in original) Some little thing is always missing to close the black box once and for all. Latour (1987, p. 13)

Any kind of social science research aims at improving social practices, be it by *Pedagogy of the City* (Freire, 1993), *Critical Education in the Information Age* (Castells, 1999), normative ethics *On Education* (Russell, 1969) or *Rethinking University Teaching* (Laurillard, 2002). One consequence of how academics or fire souls decide on the aim at improving disadvantaged people’s life conditions is to help others realize the need for launching interventions into situated practices. Such interactive, democratic and liberating (deliberative) interventionist research is an optimal choice of method which calls for attention to researcher and practitioner goals, values and actions. Having identified the prerequisites for forming a proper methodology, the researcher adopts a balanced approach between argumentative advocacy on the practitioners’ behalf and objective rigor for the benefit of the research community. If designed and carried out along those lines, activity theoretical research leads to development of theory just as application of a proper theory leads to design and implementation of socially productive and democratic practices.

Sannino, A., & Sutter, B. (2011) describe interventionist research and development as a coupling between activity theory and interventionist methodology. Others outline the difference between interventionist method and interventionist methodology. It is hard to

describe how a practical research method for developing ongoing activity becomes a sound methodology just by labeling the approach cultural historical. If described like this it seems as if the problem were merely a case of contradiction of terms rather than a misunderstanding of the meaning of terms. A title like “Cultural-historical activity theory and interventionist method” might do the trick.

In spite of the risk of mixing up theoretical methodology with practical method, there is conceptual and methodological affinity between generation and interpretation of knowledge, societal development and interventionist research. Social science research, regardless of specific disciplines, lies close to studying and changing of societal practices. One extreme form of research method emanates from materialist cause-effect conceptions of science. Another extreme form of research method orients towards subjective-idealist description and understanding of human experience. Finally, there is a distinction to be made between method, methodology and epistemology. Depending on emphasis on theory, research or practice, the actual choice of field research methods influence the result. For example, proponents of activity theory say theory and practice form the core of conceptual and practical approaches to studying human behavior. They argue that theory and epistemology make up the constituents of activity theory. They also suggest that ethnography differs from activity theory because the latter contains argued and agreed relations (models, findings, concepts etc.) between theory and practice.

In conducting democratic and theoretically valid research there is a need to apply a proper methodology and adapt it to the objective of a planned study. Kaptelinin and Nardi (2006, p. 71-72) suggest activity theory research should start with a definition of the problem and then focus on selection of a suitable *method*. Finally, the researcher should design, manage and study “the formative experience which combines active participation with monitoring of the developmental changes of the study participants.” As to the *methodology* of activity theory defined by problem-solving procedures, Leontev (1977) complements Kaptelinin and Nardi’s (2006) stance, emphasizing the influence of the motive (of activity) and narrowing down on individual motivations.

Analysis first identified separate activities, according to the criterion of the difference in their motives. Then the action process obeying conscious goals are identified, and finally, the operations that immediately depend on the conditions for attainment of a specific goal. (p. 7).

There are limitations as to how far the choice of methodology assists the researcher’s work. If the researcher’s objective were to study historical data, the choice would be limited to hermeneutic method for analyzing textual information. If the researcher’s objective were to study human practices there were acknowledged methodological options for analyzing field data. Varying degrees of interventionist methodologies characterize e.g. action research, cultural-historical activity theory and ethnography.

During field research on workplace learning there are levels of researcher involvement in the practitioners’ activity. The researcher’s actual choice of control depends on the researcher’s need for balancing openness and secrecy about research. And it depends on the pre-set agenda for accomplishing change in the researched activity. The researcher’s involvement, role-playing, control and commitment basically depend on setting, objective and activity. *Leader, organizer, fly on the wall, agitator* and *family member* are some of the labels people use for describing levels of researcher involvement. Regardless of appropriateness of the labels the researcher must learn to separate development from change in the studied activity. Then the researcher should be aware of gradual, abrupt, hidden, planned or spontaneous changes, interpret them and finally control future change.

It is an old contention that social practices and academic disciplines constitute a fruitful avenue for exploring society and social science research. However, one might add,

this contention holds true only if research is grounded on a theory that helps the researcher to seek the recurring laws, models, concepts and relations that form human behavior. In doing so, researchers draw on relevant inter-disciplinary ideas, models and concepts. A paradigmatic activity theoretical school of research must engage actively with societal practices. By connecting psychology with human practices a system for furthering research will see the light of day. Engagement between theory and practice has a positive effect on social science methodology and epistemology.

Philosophy of Activity Theory

We know more about isolated mental processes and skills, but we seem incapable of generating an overall picture of mental functioning. We can often find regularities under controlled laboratory conditions, but as soon as we move to other, more natural settings these findings seem to disappear in the sea of "real life". (Wertsch, 1991, p. 1)

A colleague of mine asked if general activity theory equals method or theory. I was unable to supply a coherent answer to the question there and then. After reflecting on the theme I realized that activity theory is a theory about human behavior. It is also a method suited for studying organizational development, human nature and life on earth and so on. Finally, it is a methodology based on a comprehensive set of ontological and epistemological understandings.

Since the 80's there has been growth in application, adaption and explanation of activity theory. Three generations of researchers (Vygotsky, Leontev and Engeström) have seen the light of day. Smagorinsky (2011) laid out the original foundations of early generation activity theory. Today, development of activity theory is at the crossroads, momentarily tipping towards organizational consultancy in one vein of action research (Somekh & Nissen, 2011; Wells 2011) in concord with information science, systemic thinking, (Orland-Barak & Becher, 2011) digital communication, ethnography or psycholinguistics (Leitsch, 2011). Other contemporary approaches to analyzing narrowly defined and locally situated developmental activities include objectification related to HIV/AIDS (Marková, 2012) and bioengineering (Nersessian, 2012).

Understanding human motivation is key to understanding activity theory as theory, be it by choice of action or by effect of motive, or development by collective input to perform or analyzing object of activity. Roth and Lee (2007, p. 201) say the Russian word which translates *activity* carries with it aspects of meaning like *work*, *job*, *function* and *doing*. Kaptelinin and Nardi (2006, p. 60) say the concept of activity specifically suggests "a unit of subject-object interaction defined by the subject's motive." Chaiklin (2011, p. 141) clarifies a distinction of the concept *activity* which refers to "institutionalized practices of human life". Another related meaning ascribed to activity refers to "purposeful human transformation of nature". All the above definitions of activity cover explanatory principles for human behavior.

The contents of this book reflect ongoing development of theory and practice as suggested by cultural-historical activity theory (CHAT). General activity theorists argue that emphasis of research should be on mediated action in socio-cultural contexts. Their use of a generic method for doing so includes both historical and cultural levels of analysis. For any definition of activity applies that research is grounded in everyday events, situations and activities. Likewise, crucial-central-developmental trajectories of phenomena like activity, awareness and personality emerge in joint (learning and developmental) activity between people. Reality and mind comes out as a co-constructed pair of "facts" supported by individual agents. A wide view on how to define activity embraces the emergent nature of mind and behavior, acknowledging the role of an interpretative framework influenced by transdisciplinary psychology, pedagogy, philosophy and sociology.

Concepts like awareness, action, agency, appropriation, object, objective, double stimulation and zone of proximal development relate to chapters directed towards the study of activity (systems), including concepts like artifact, tool and instrument plus multi-voicedness, contradictions and expansive cycles of work. Cole (1996) outlines a narrow analytical focus on the expansive meaning of artifact. His example is an indication of the depth and width of activity theory.

An artifact is an aspect of the material world that has been modified over the history of its incorporation in goal-directed human action. By virtue of the changes wrought in the process of their creation and use, artifacts are simultaneously ideal (conceptual) and material. (p. 117)

Co-ordinate evolution of activity, agency, mind and similar concepts has resulted in growth of studies covering individual achievement, shared activity, communication and societal development. The language we speak and the artifacts we use serve personal and shared purposes, they become tools and symbols for the development mind. Artifacts direct our inner attention and outer actions, supporting individual construction of “alternative worlds”. The social worlds we produce, adapt to and participate in influence individual mind as we communicate, argue and persuade others. So do the social practices that past generations initiated and managed for our benefit.

A socio-cultural/cultural-historical approach to studying activity and mind suggests a parallel focus on the interrelatedness between individual and societal development. Social practices lead the way to continuous understanding of what it means to be human and to take action in collective activity. Provided we make room for addressing objects, qualities, people and objectives people continuously change. We also change the activities that we form and we are.

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