

Learning and Expanding with Activity Theory

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LEARNING AND EXPANDING WITH ACTIVITY THEORY

This book is a collection of essays on cultural-historical activity theory as it has been developed and applied by Yrjö Engeström. The work of Engeström, rooted in the legacy of Vygotsky and Leont'ev, focuses on current research concerns that are related to learning and development in work practices. Engeström's publications encompass various disciplines and develop intermediate theoretical tools to deal with empirical questions. In this volume, Engeström's work is used as a springboard to reflect on the question of the use, appropriation, and further development of the classic heritage within activity theory. The book is structured as a discussion among senior scholars, including Engeström himself. The work of the authors applies classical activity theory to pressing issues and critical contradictions in local practices and larger social systems.

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EDITORS' INTRODUCTION

ANNALISA SANNINO, HARRY DANIELS, AND
KRIS D. GUTIÉRREZ

In 1884 the Finnish realist artist Albert Edelfelt completed a painting entitled *Boys on the Shore*. In the painting three boys are playing with small handmade sailing boats on the shore. There is an expansive view of the horizon in the background, with sailboats in the harbor. The painting provides a dynamic perspective on a world of possibilities experienced in the play of the three boys. At the same time, corresponding historically consolidated activities are carried out in the background. The three boys are involved in different ways in a joint action, oriented toward the movement of a boat in the water. The painting powerfully depicts the contrast between the strength and the fragility of the collective action. Two boys are positioned precariously on rocks, while the third is about to move toward them, stepping on an uneven and slippery surface. One of the boys is leaning toward the water with a wooden stick in his hand, trying to guide his boat through the current.

The scene in this painting metaphorically illustrates key features of the process of expansion as described in Yrjö Engeström's book *Learning by Expanding* (1987). Engeström's comment on children's play could well apply to Edelfelt's painting:

Old and new, regressive and expansive forms of the same activity exist simultaneously in the society. Children may play in a reproductive and repetitive manner, but they do also invent and construct new forms and structures of play, new tools and models for play activity. Their playing seems to become increasingly consumptive and pre-fabricated, the exchange-value aspect seems to dominate it more and more as the toys and games have become big business. But is it so simple and uni-directional? What are the inner contradictions and historical perspectives of the play activity of our children? Once in a while parents are astonished as they find their children playing something which does not seem to fit any



Figure I.1. *Boys on the Shore* (Albert Edelfelt, 1884).

preconceived canons: something new has been produced “from below.” Sometimes these inventions from below become breakthroughs that significantly change the structures of play activity. (1987, pp. 173–174)

Expansion is a form of learning that transcends linear and socio-spatial dimensions of individual and short-lived actions. Within the expansive approach, learning is understood in the broader and temporally much longer perspective of a third dimension, that is, the dimension of the development of the activity (Engeström, 1999c, p. 64). 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). The zone of proximal development characterizes this process: “In activity-theoretical terms, activity systems travel through zones of proximal development ... , a terrain of constant ambivalence, struggle, and surprise” (Engeström, 1999c, p. 90).

By editing this book, we wanted to promote these kinds of exchanges – ambivalent, sometimes conflictual, and always unpredictable in their

outcomes – between scholars who relate in different ways to activity theory. This book is a collection of essays about cultural-historical activity theory as it has been developed and applied by Yrjö Engeström. The work of Engeström, rooted in the legacy of Vygotsky and Leont'ev, focuses on current societal concerns that are related to learning and development in work practices. Engeström's publications are diverse, cross various disciplines, and develop intermediate theoretical tools to deal with empirical questions. In this volume, Engeström's work is used as a springboard to reflect on the question of the use, appropriation, and further development of the classic heritage within activity theory.

We see the exchanges in this volume as the beginning of an interesting process of learning and expanding with activity theory. "Expansion is qualitative transformation and reorganization of the object. On the other hand, expansion does not imply an abrupt break with the past or a once-and-for-all replacement of the existing object with a totally new one. Expansion both transcends and retains previous layers of the object" (Engeström, Puonti, & Seppänen, 2003, pp. 181–183). The book constructs Engeström's work as an object of academic discussion. Through the book, this object begins to expand as the authors redefine Engeström's work in the context of their respective analyses. "The creation, mastery, and maintenance of such expanded objects is a demanding and contradictory challenge to the parties involved. Expanded objects require and generate, and are constructed by means of novel mediating instrumentalities" (Engeström, Puonti, & Seppänen, 2003, p. 154). Like the wooden stick used by one of the boys in Edelfelt's painting, the contributions by the authors of this volume can be seen as mediating instrumentalities that allow one to reconceptualize activity theory in connection to related fields.

The authors in this volume address themes central to the classical roots of cultural-historical activity theory and to the theory and methodology Yrjö Engeström has developed. These themes include units of analysis, mediation and discourse, expansive learning and development, agency and community, and interventions. In this way, the structure of the book follows the conceptual genesis of activity theory. We begin with the foundational concepts of units of analysis and of mediation and discourse, and then move to further theoretical developments, namely expansive learning and development, and agency and community. The final theme of interventions represents the pragmatic side of the theory, as well as an open ending that reflects the fact that activity theory is far from complete.

Each author takes at least one of the five themes as a point of connection between Engeström's ideas and the author's own work. Engeström (1996b)

proposed the notion of three generations of activity theory. He initiated the third generation of activity theory, which expands the unit of analysis to encompass relations between multiple activity systems. This volume covers different generations of activity theorists. Among them, ideas of the third generation are strongly represented, while the chapters are overall firmly rooted in the legacy of the first and second generations. The work of the authors applies classical activity theory to pressing issues and critical contradictions in local practices and larger social systems. The general aim is for each contribution to show how these theoretical and methodological resources can be used for practical applications and empirical challenges. The authors illustrate how these themes have been developed in their own inquiries and discuss the challenges that these developments evoke for future research and theorizing.

The first chapter, by Annalisa Sannino, Harry Daniels, and Kris D. Gutiérrez, is a review of the ways activity theory and the work of Yrjö Engeström promote dialogue between theory and practice, as well as between the past, the present, and the future. This chapter contributes to recent discussions concerning the legitimacy of activity theory as a unified theory. The authors point out two distinctive features of activity theory that can define the boundaries of the field. Activity theory is both a practice-based theory and a historical and future-oriented theory. The authors demonstrate how the theoretical contributions of the founders of cultural-historical activity theory are solidly grounded in practice. Also, activity theory has the peculiar and distinctive characteristic of developing as an integral part of the historical turmoil through which activity theorists have lived. The authors recollect two phases of turmoil in the development of activity theory: first, the Russian Revolution, which triggered the engagement of the founders, and second, the student movement through which activity theory was rediscovered and further developed in Europe. Finally, the chapter traces the steps taken by Yrjö Engeström in his work to promote dialogues between theory and practice, on the one hand, and between the past, the present, and the future, on the other; the authors discuss the texts that have most prominently influenced him and demonstrate how these readings are intertwined with historical circumstances in the development of his ideas. This historical review of activity theory and of Engeström's work sets the context for the other chapters in this volume.

The chapters in the first part address the units of analysis. The adoption of object-oriented and artifact-mediated activity as a new unit of analysis is one of the main contributions of cultural-historical activity theory. This

methodological innovation represents a challenge to traditional thinking in human and social sciences, which rely on deep-seated individualism and on views of society as an anonymous structure. Object-oriented and artifact-mediated activity as a unit of analysis retains the importance of subjectivity, while integrating it with cultural means and constraints that inescapably characterize human practices. In doing so, this unit of analysis integrates society into activity. At the same time, there is a fruitful debate within activity theory on how to ensure that the subject, including emotions and the body, is fully taken into account in the formulation of the unit of analysis.

Frank Blackler expands the unit of analysis by putting it into use in the field of organization studies. He outlines recent contributions in this field that adopt concrete and situated activity systems, rather than the abstract systems of formal organizations, as the unit of analysis. The author emphasizes the relevance of the theory of expansive learning in analyzing how historically located organizations can influence their own work. Further necessary developments of the theory and of related interventions in organizations are highlighted. They correspond to the need to design interventions based on the recognition of complex organizational dynamics, such as hierarchy and disadvantage, and on a vision of work change. The development of intervention research requires further exploration of the nature of social and organizational re-mediation with regard to institutionalized power structures.

David R. Russell discusses how the theory of expansive learning has been adapted to writing, activity, and genre research in recent and ongoing studies of professional communication and writing. Research on written communication analyzes primarily texts. Contexts are examined through the history and ethnography of organizations to give a principled account of development over longer timescales. The author points out ways in which the theory of expansive learning has been modified in its uptake and ways in which those modifications challenge and potentially expand the theory and related methods for activity-theoretical researchers outside the field of written communication. Genre as social action is used as a unit of analysis to understand how organizations change. In particular, the concept of genre systems allows the analysis of written genres in and between organizations. The focus on genre systems is considered instrumental for studying coordination and interactions across boundaries and among activity systems. Both moment-to-moment coordination and historical development are seen to materialize through written genre systems that last over time and move in space.

Wolff-Michael Roth discusses the inclusion of sensuous aspects of work, such as emotion, identity, and ethico-moral dimensions, in the model of the activity system. He illustrates how one might collect salient data for this purpose. The author presents a case study of the work in a salmon hatchery, based on five years of ethnographic fieldwork, with the aim of demonstrating that sensuous aspects of work are woven into practical activities. He suggests that, by taking into account sensuous aspects of work together with the structural dimensions of the activity system, the link between emotions and participation in activity can be preserved. By acting as participant-observer and by observing participants in the work practice, the researcher has access to different perspectives and ways of experiencing work.

The second part of this volume addresses the concepts of mediation and discourse. It focuses on how culture is foundational to human activity in the form of mediating tools, language, signs, symbols, and categories. This theme is particularly relevant in an era in which technology and digital media are both empowering and controlling human practices. Since all activity is mediated, the study of technologies must be embedded in human activities where tools and media are generated, used, and modified. Technological and discursive mediation are unavoidably intertwined in every activity.

Vladislav A. Lektorsky addresses in his chapter the relations between collective activity and individual subject, between internalization and externalization, and between reflection and change. The chapter elucidates in particular the key activity-theoretical notions of subject and mediation. These notions are reconceptualized respectively in terms of collective subject and reflective mediation. The latter is seen as a means of promoting change in activities and creating new collective activities. Interventionist research is discussed as a particular kind of reflective mediation. Lektorsky argues that when the results of research are accepted by a community, the knowledge obtained may re-mediate activities and change human reality.

Georg Rückriem argues that digital technology is radically affecting the nature of human activity and that this transformation has not been sufficiently recognized in activity theory. The chapter openly takes activity theorists to task for being captive to the old culture dominated by the medium of print. The chapter highlights the shortcomings of the activity-theoretical concept of mediation and the related concepts of tool, symbol, and artifact. Rückriem claims that mediation is regularly regarded only in relation to specific activity systems within societies, rather than focusing on the "leading medium" of the contemporary society itself. The author argues that in order to come to grips with contemporary global challenges

such as Web 2.0, activity theory needs to reinvent itself by learning from media history and media theory.

Åsa Mäkitalo and Roger Säljö analyze how a social dilemma involving burnout, stress, and long-term sick leaves is negotiated as an object of institutional activities by trade unions and employers in labor market organizations. The chapter focuses on the use of institutional categories in local discussions to define the dilemma and possibilities of the transformation of existing categories in response to local tensions and challenges. The analysis points out the need to reconsider institutionally well-established categories as potential discursive tools for designing new strategies and activities.

The third theme elaborated in this volume is expansive learning and development as collective transformations in activity systems. Activity theorists argue that this type of learning and development is increasingly relevant to our ability to understand how to deal with the discontinuities and disruptions of everyday life, which interestingly reflect major uncertainties on societal and global scales.

Michael Cole and Natalia Gajdamashko address the problem of teleology in human development. The authors take as starting points the question of teleology in development as treated by Engeström in *Learning by Expanding* and his characterization of development as a process of breaking away and opening up. Teleology is discussed in relation to phylogeny, cultural history, and ontogeny and their respective timescales. The authors examine three principles of development that were originally identified by Engeström as unappreciated by developmentalists: development as destruction and rejection of the old, development as collective transformation, and development as interwoven dialectics of vertical and horizontal movements. The chapter highlights the ways in which Engeström's approach fits with theories of human development and special contributions arising from his works.

Jaakko Virkkunen compares the conceptualizations of knowledge creation in the theories of Engeström and of Nonaka and Takeuchi. An empirical case from Nonaka and Takeuchi's work is reinterpreted through the lenses of both theories. As a result of the comparison, the author argues that a fundamental difference between the two theories lies in their approach to historical development. Consequently, concepts such as inner contradiction, object, and generalization have very different meanings in the two theories.

Reijo Miettinen focuses on the concept of contradiction as defined in the theory of expansive learning and on its uses in empirical studies of health care work, based on the methodology of developmental work

research. Drawing on Marx's *Grundrisse* concerning the inner contradiction of capitalist production, the author argues that high-technology capitalism with its new forms of distributed production, exemplified by Linux, Wikipedia, and Synaptic Leap, directly challenges the logic of capitalist production. On this basis, the author solicits a broader analysis of contradictions that would also include further conceptualization of relations between contradictions.

Shuta Kagawa and Yuji Moro take up the legacy of Spinoza's philosophy as a resource for elucidating and expanding the concept of activity to include local interactions and affective aspects of learning. For this purpose, three key concepts in Spinoza's works are considered particularly important: multitude of activity, constrained forms of individual agency, and imaginative-discursive practice. The authors also apply Spinoza's concepts of imagination and discourse to the problem of transfer in learning. Spinoza's concept of discursive practice as a form of activity is used to illustrate the significance of discourse in student nurses' transitive learning.

The increasing emphasis in activity-theoretical research on the possibility of human beings' gaining influence and agency over their own lives and in collective institutions is reflected in the fourth theme of agency and community. Activity theory has been sometimes mistakenly read as a fixed theory of impersonal systems and structures. In fact, the object of activity theory is to analyze human lives involved in collective activity systems. The challenge here is to work out a new understanding of agency as collaborative, dialogic, and reflective subjectivity. We acknowledge that agency and community are emergent themes. Although they can be traced back to Vygotsky's works, they remain long-term research challenges in activity theory.

Anne Edwards draws on two tentative notions recently used by Engeström with regard to the issue of agency in interorganizational collaboration, namely collaborative intentionality capital and object-oriented interagency. While Engeström discusses these notions in terms of collective intentionality and distributed agency, this chapter proposes the concept of relational agency as a means to shift the focus from the systemic nature of work activity to joint actions within and across activity systems. Relational agency is offered as an enhanced form of personal agency and is defined as a capacity to recognize, examine, and work with the resources offered by other practitioners in collaborative action on an object of professional activity. The argument is backed up with empirical evidence from two studies on practitioners in various organizations aiming at the prevention of social exclusion of vulnerable children and youth.

Katsuhiro Yamazumi examines a particular type of agency, called expansive agency, emerging in a project of collaboration between a university, schools, and various community organizations. The project exposes students to food-related productive practices. Contradictions between the logics of the different activity systems involved are depicted as factors that at the same time obstruct and energize learning. These contradictions can bring about agency in efforts to master and cultivate shared objects between the different activity systems.

James R. Taylor argues that the concept of community needs to be explicitly problematized and further conceptualized within activity theory. Rather than merely a parameter or a context, community is discussed in this chapter in terms of a constructed outcome and object of an activity. Using a revised version of coorientation theory, the author suggests that the construction and existence of a community firmly tie subjects in coorientational relationships that inevitably involve authority.

Sten Ludvigsen and Turi Øwre Digernes focus on the activity-theoretical notion of object to understand the work of productive research communities. In particular the chapter addresses the impact of leadership on the research group's work in a community within humanities and a community within computer science. The analysis of common traits and differences between the two communities points out learning potentials and affordances for the integration of research Fellows in these communities. Microprocesses of negotiation are seen as an emerging object that redirects the work of researchers. The analysis suggests that the type of research focus, whether more or less open, adopted by a scientific community might affect these negotiations differently, influencing productivity and opportunities of integration by young researchers.

The final theme organizing this volume concerns interventions as conceptualized in the framework of the theory of expansive learning. Interventions are seen as a direct continuation of the lineage of the research of the founders of activity theory. The strong connection between the classic work of these Russian scholars and tangible transformations in human life is already described in the first chapter of this volume. However, interventions in the years of the founding scholars were typically focused on one subject at a time. Today interventions are also realized in collective settings, in order to promote the development of complex activity systems. The methodology of developmental work research and the Change Laboratory are well-known examples of attempts to move in this direction in Engeström's work. Intervention literature is still relatively limited, and constructive methodological debates are only beginning to be undertaken within activity theory.

Ritva Engeström discusses three interventionist studies in cleaning work and health care based on the methodology of developmental work research. She examines how subjectivity was constructed in these studies using the activity system as a unit of analysis. The author suggests that subjectivity may be examined in three interrelated activities: the central activity, the learning activity, and the activity of sense-making and experiencing. She argues that the collective nature of the subject is a result of collaboration between researchers and practitioners within interventions, in which the participants make conscious efforts at co-construction and joint learning.

Susanne Bødker discusses the relationship between participatory design research and developmental work research, in particular the Change Laboratory method. The author points out that today the participation of users in design can no longer be limited to workers in a given practice. Because technology and artifacts today cross the boundaries of work and personal life, it is necessary for participatory design to involve users considered within the perspective of their entire lives. Commonalities and differences between participatory design research and developmental work research are highlighted with regard to issues of work across organizational settings, design as a process going beyond work communities, exploration of the unknown, and consumerism.

Yves Clot explores connections and differences between the framework of expansive learning and the French intervention approach called the Clinic of Activity. Three main issues are discussed: transformative action in workplace interventions, the collective dimensions of human activity, and modeling as a tool for developing the action of the subjects. The author points out that the will to act in the real world allows activity theory to offer an alternative to positivism in science. This orientation is rooted in the indirect methods advocated by Vygotsky: One has to transform in order to understand. A psychological subject does not function in opposition to the social world. Not only does the subject exist in a collective; the collective also exists in the subject. The relationship between the theoretical model of activity and the transformative actions of practitioners is seen, from a Vygotskian point of view, as an example of the relation between everyday concepts and scientific concepts.

The last chapter of the volume is an epilogue written by Yrjö Engeström as a response to and reflection on the other chapters.

Before completing this introduction to the volume, we cannot fail to mention all those who contributed to its preparation. Our thanks go to the following colleagues for reviewing the chapters: Paul Adler, Susanne Bødker,

Mariane Cerf, Michael Cole, Jan Derry, Anne Edwards, Marilyn Fleer, Kai Hakkarainen, Martin Hildebrand-Nilshon, Hannele Kerosuo, Philippe Lorino, Sten Ludvigsen, Åsa Mäkitalo, Vesa Oittinen, Sami Paavola, Paul Prior, Wolff-Michael Roth, Roger Säljö, Peter Sawchuk, Falk Seeger, Berthel Sutter, James R. Taylor, Terttu Tuomi-Gröhn, Jaakko Virkkunen, and Gordon Wells. Most of all, we express our gratitude to Yrjö Engeström for his work, which keeps inspiring us. In recognition of his 60th birthday, this book is dedicated to his life engagement and timeless contribution to the field of activity theory.