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Introduction

How to do research on activity?

Yrjö Engeström

As Vygotsky's legacy is becoming relatively widely known and appreciated in the western world, roughly speaking two strategic interpretations seem to emerge.

The first one maintains that Vygotsky's insights, as important and inspiring as they may be, can be relatively smoothly integrated into the broad mainstream of western cognitive-developmental research. Ideas like the social mediation of individual learning and problem solving as well as the zone of proximal development are regarded as novel ingredients which may be used to enrich and widen the scope of the otherwise basically untouched research paradigm. In other words, the basic unit of analysis remains the individual. And there is a tacit silence about the cultural-historical aspect of Vygotsky's notion of mediation - about that which goes beyond the face-to-face interaction of the individual and his/her more capable partners.

The second interpretation - the one advocated by the authors of this issue - sees Vygotsky and his colleagues as a founders of an emerging approach, commonly called the cultural-historical or sociohistorical school. This approach is viewed as fundamentally different from the mainstream of cognitive-developmental research in that it radically departs from individualism and mentalism. According to this interpretation, Vygotsky's idea of mediation is a complex one, providing a bridge between individual and societal development, between phylogenesis, ontogenesis, and history. Artifacts, tools, technologies are as vital as human beings as components of systems of human practice. Systems of collaborative human practice are called activities. The activity system is seen as the central unit of analysis - hence the term activity theory. Individual actions and mental representations are understandable as integral elements of the activity systems in which they function, take shape, and constitute.

This second line of interpretation is in an early phase of its development as a research strategy. As

western researchers gain acquaintance of activity theory, they often ask: How do you do concrete research on this basis? This is a legitimate question, especially since the bulk of concrete research done by Leont'ev and other Soviet activity theorists is still unavailable in English (although Leont'ev's collected works are soon to appear in German in six volumes under the general editorship of Georg Ruckriem from West Berlin - a publication never accomplished in the Soviet Union).

The three articles in this issue each approach the challenge of creating a distinctly new paradigm in a different way.

Concrete research is based on philosophical and epistemological assumptions and cannot succeed without an awareness and continuous development of these assumptions. In activity theory, these assumptions are fundamentally different from the assumptions of Cartesianism. In the first article, David Bakhurst illuminates this dimension of activity theory through his discussion of the work of E. V. Ilyenkov. Ilyenkov's two books (1977; 1982) are available in English. A reader interested in the debate between cognitivism and dialectics may also find Ivana Markova's (1982) recent volume useful.

Activities are located and evolve in real space and time. In the second article, Berthel Sutter and Bengt Grensjö report on an extensive study of local historical explorative learning in Swedish schools. In the third article, Yrjö Engeström and Timo Kallinen discuss the work activity of Finnish theatre professionals. Both activities involve rich constellations of mediating artifacts: tangible like parish records, microfiches and database programs in the former; less tangible but no less real like "superobjectives," and "through actions" in the latter.

All the three articles are concerned with collectives, or collective subjects to use Lektorsky's (1984) term. And they are concerned with transformations, not with stable states. The three articles also demonstrate something of a preliminary, sketchy quality. Partly this is due to the particular circumstances in which they emerged. But this quality is also intentional, reflecting the early probing stage in activity-theoretical research. They should be read as invitations to a shared search.

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Activity, Consciousness and Communication

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"Soviet Communitarianism" and the Socially-Constituted Individual

One of the most pervasive beliefs encountered in the human sciences is the idea that each individual owes his or her existence to society, that our personalities, needs and wants are nurtured and sustained by the communities in which we live. This idea, however, is as elusive as it is ubiquitous. It is hard to make sense of the social nature of our being without appearing either to be labouring something so obvious and incontrovertible as to be empty of methodological significance, or to be advancing a thesis so radical as to threaten the very possibility of human individuality and self-determination. The great achievement of the Soviet intellectual tradition of which Evald Ilyenkov is part is that it offers a powerful account of exactly in what sense man is a social being. I'll begin by characterising the central ideas of this Soviet tradition, and raising a powerful objection aimed at one of the tradition's most attractive features: its theory of the mind. Then, by drawing on Ilyenkov's ideas, I hope to show how this theory can be defended from this objection, and defended in a way which leaves us with a compelling theory of man as a socially constituted being.

Ilyenkov is a member of a school of Soviet Marxism which first emerged in the fertile years of the

1920's and 1930's, particularly in the seminal work of Vygotsky, and also Voloshinov (and/or Bakhtin). It was preserved through the tumult of the Stalin period, principally by psychologists of the so-called "Vygotsky school." In the rejuvenation of the Soviet intellectual life after Stalin it acquired some impressive new exponents, of whom Ilyenkov is the most distinguished philosopher. In the latter half of his career, Ilyenkov was adopted by the psychologists of the Vygotsky school as their philosophical mentor. There is no satisfactory name for this tradition, so I'll refer to it here as the "communitarian tradition" in Soviet thought. The term "communitarian" at least marks the resolute anti-individualism of the tradition, its recognition that we, in some strong sense, owe our very humanity to the communities in which we live our lives.

Although it's difficult to generalise across the tradition as a whole, I think we can isolate four interrelated theoretical insights which all Soviet communitarians endorse (at least under some interpretation):

- (1) The mental life of the human individual exists in the forms of its expression. That is, the higher mental functions which constitute human consciousness are essentially embodied in, or mediated by, language (in the broadest possible sense of the term). By "higher mental functions" Soviet communitarians mean mental capacities like thinking, believing, remembering, wishing, desiring, hoping, imagining, and so on. These capacities, in their most highly developed form, constitute an interrelated system of mental functions which only humans exhibit.
- (2) Language is an essentially social phenomenon, in at least this sense, that the possibility of language presupposes the existence of a socially-forged communicative medium: a set of shared social meanings against which alone any communicative act has its reality.
- (3) This set of "shared social meanings" represents a culture. Cultures are real phenomena which are constituted by socially significant forms of activity of a community: cultures objectively exist in the form of social practices.
- (4) It is only through the appropriation of such socially significant forms of activity that the human child becomes capable of the higher mental functions. The child's mind is formed through his/her inauguration into a culture.

These four insights already appear to offer the basis of an argument that we are socially constituted beings. For if language is the living actuality of thought, and language presupposes a socially

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constructed phenomenon--a culture, then it must in some sense be true that the mental life of the individual has its being only in a social context. However, the insights themselves are only the bare bones of this argument: its premises and conclusion remain horribly vague. As I've presented them, the insights tell us that consciousness, culture and language are interrelated, but they don't tell us exactly how. For example, the term "essentially" in (1) and (2) is unclear. When we say that consciousness is "essentially embodied in language" do we mean that the mind necessarily exists in the forms of its expression, that is, that it could not exist otherwise? Or do we mean something weaker - that, say, as a matter of psychological fact, our mental states are always, or almost always, formed in language? So, (1) - (4) need to be developed, if they are to be turned into a theory of the socially constituted individual.

Someone might wonder whether these insights are not insightful enough as they stand without subjecting them to rigorous conceptual clarification. However, one reason why we should care about exactly what these insights amount to is that they appear to offer a potentially innovative and distinctive model for the study of communication as an interdiscipline. For if our mental lives are lived only in society through their expression in socially-mediated communicative practices, then the domains of psychology, sociology and language studies (in all their multidimensionality) will become intrinsically interwoven. But just how these disciplines are interwoven will depend on exactly how mind, culture and language are interrelated. So, the more precise our understanding of (1) - (4), the clearer we shall be about the conceptual framework Soviet communitarianism offers the interdiscipline "communication."

The best way to assess insights (1) - (4) is to look at what the Soviet communitarian tradition has made of them. And in the present context, it makes sense to concentrate on the theory of the mind which Soviet communitarians have developed in the light of (1) - (4), for it's in the philosophical psychology of Soviet communitarianism we find the most radical statement of the social constitution of the individual. This theory of the mind is based on three theses:
(A) Activity - that is, social forms of *material* activity - explains (or is the "key concept" in the explanation of) the nature and origin of human consciousness. Since consciousness is the mark of our humanity, "we become human through labour" (as Leont'ev put it);

(B) The higher mental functions are social in nature and origin. The individual mind lives its life in a social medium: mind is (to adopt a coinage of Michael Cole's) "in society";

(C) The higher mental functions are internalised forms of social activity (Vygotsky's "General Genetic Law of Cultural Development").

According to Soviet communitarians, to understand these theses correctly is to arrive at an understanding of the essence of the human individual as (in Marx's words) "the ensemble of social relations."

Our task, then, is to find the right way of reading theses (A) - (C). I want to approach by considering an objection which purports to show that, since there *can be no* theoretically satisfactory way of interpreting (A) - (C), the basis of the communitarian theory of the mind is completely misconceived. As this objection might come from a number of different philosophers, I'll refer to the objector simply as "the enemy."

The enemy argues that there are two, and only two, ways of reading theses (A) - (C). While first reading makes these theses so weak that they become philosophically insignificant, the second makes them so strong that they are false to the point of unintelligibility. Take, for example, (A) and (B). On the weak reading, says the enemy, (A) and (B) claim that material activity and social interaction are empirical preconditions of our mental lives. That is, explanations of how we acquire mental states and of how our intellectual capacities and personalities develop must make reference to our active engagement with our surroundings and with other individuals. But, says the enemy, this is an utterly uncontroversial claim! Of course, to acquire mental states and to develop our minds we have to interact with the world and with others, but no one, whatever their philosophical colours, ever denied this. And something which no philosopher ever denied can scarcely be of vast methodological significance for philosophy!

Okay, the enemy continues, since this weak reading of (A) and (B) is so hopeless, how else might Soviet communitarians intend these theses to be understood. Well, in the case of (A), Soviet communitarians sometimes appear to be advancing the strong thesis that material activity is literally *constitutive* of the mental. This is a philosophically interesting thesis which, if true, *would* make it the case that talk about activity was essential to the explanation of the mental. However,

says the enemy, such a thesis could not possibly be true for the following reason. The mental has all kinds of interesting properties: mental phenomena are capable of having a certain *phenomenology* (experiences "feel" or "seem" a certain way); some mental states have "intentionality," that is, they are directed toward a certain *content or meaning*; we each have a special acquaintance with the contents of our minds which others do not share, and so on. Once we reflect on these qualities of the mental it is obvious that no amount of talk about *material doings*, about transforming nature, could ever explain the possibility of mental phenomena: *We can't get phenomenology out of labour.*

Likewise, in the case of (B), Soviet communarians could be taken to be making the strong claim that the higher mental functions are literally "not in the head," that the mind is, in some radical sense, constituted in public space. Once again, however, the enemy will say that this thesis is at best only metaphorically true. If we take it literally, in so far as it is comprehensible at all, it is false.

So the objection to (A) and (B) appears as a dilemma. They are either true, but (philosophically) trivial, or false. Either way they're theoretically bankrupt.

It might be thought that Soviet communarians can rescue both (A) and (B) by appeal to the idea of "internalisation" in thesis (C). Can't they respond like this? When we say the mind is a social phenomenon and is explained by activity, what we mean is that the higher mental functions must be understood as internalised forms of social activity. On such a view, the process of appropriation of socially significant forms of activity in which the child's mind is formed is a process in which these social activities are translated from the *interpsychological* plane onto the *intrapsychological* plane, where they reemerge, in restructured form, as the child's higher mental functions. Thus, (A) and (B) need not be taken as implying that mental functions are literally located in society, or actually constituted by material activity. Rather, what we're claiming is only that, in the explanation of the nature and origin of consciousness the direction of the explanation runs from the social to the individual: we explain *intrapsychological* phenomena in terms of *interpsychological* phenomena, and not vice versa.

However, the problem with this response is that it invites the same attack as (A) and (B). The enemy will argue that, as a theory of the origin of the mental, the internalisation thesis is ambiguous between two readings. Soviet communarians may be claiming that the child's intellect only *develops* if he or she engages in certain forms of activity (the child only, say, will learn to count if drilled in certain practices). This, however, is true but trivial: of course the child's mind doesn't somehow develop spontaneously! Alternatively, communarians may be saying that the child's mind is somehow *created* by the process of internalisation. (They do claim just this incidentally.) But that surely cannot be true! For, the child could not even begin to internalise anything if it were not already conscious: you can't explain the very possibility of the *intrapsychological* by appeal to the *interpsychological* because there can be no *interpsychological* relations unless the *intrapsychological* already exists.

Thus, all three theses seem open to the objection that they are either trivially true, or false. Either way, it's a disaster for communarianism. To answer the objection, then, we must find some way of understanding the communarian's position which restores its theoretical credibility.

Lest it be thought that I'm discussing Soviet communarianism in a historical vacuum, let me say that the objection I've raised from this unspecified "enemy" has considerable historical actuality. It might be put, not only by some of my colleagues in Oxford, but also by contemporary Soviet thinkers who are suspicious of the communarian tradition. For, while the Marxist pedigree of insights (1) - (4) and theses (A) - (C) makes it almost mandatory for Soviet theorists to accept them under *some* interpretation, many will endorse them only under the weakest possible interpretation. Consequently, there is a rift in the Soviet philosophy and psychology between those who commit themselves only to the weak reading of (A) - (C), and those who argue for something stronger and who vehemently resent the reduction of what they take to be the central theses of Marxist psychology to a collection of truisms. So, our dilemma reflects a real division in the world of Soviet theory.

In what follows I want to try to defend Soviet communarianism from this objection. I want to show that a theoretically intense interpretation of its doctrines is the correct one. In so doing, I'll be drawing in particular on Ilyenkov's ideas, though in many places

I'll be reconstructing and extrapolating from Ilyenkov's position rather than simply reporting it.

The Influence of the Cartesian Conception of the Self

Ilyenkov would have insisted that we first diagnose the source of the problem. Why is it someone might feel that, at best, (A) - (C) express only trivial truths of no concern to philosophy? I believe - and I think Ilyenkov would agree - that this feeling is caused by the dominance in our philosophical culture of a particular conception of the self. This conception, which was introduced principally by Descartes, has had an enduring and pervasive influence on philosophy. It dominates the thought of the Enlightenment (especially the empiricism of Locke and Hume, and the rationalism of Kant) and still continues to hypnotize the Anglo-American tradition of "analytic" philosophy.

At the heart of Cartesianism is an idea we encountered in the attack on the thesis that activity explains consciousness. The Cartesian stresses that the mental has properties fundamentally different from the kinds of properties physical things can have. Examples of such properties are: meaning or content, phenomenological properties (feelings, seemings, pains), subjectivity, undubitability... Descartes himself introduces the idea of a special kind of "mind stuff," a non-extended substance, which is the substratum of all these properties. But the idea of the mind as a special substance is not, I believe, the determining characteristic of Cartesianism.

The basic image at the heart of the Cartesian conception is (to use Rorty's favourite metaphor) the picture of the mind as a great *mirror* containing various representations. Onto the glass of the mind images of the external world are cast. In the Cartesian tradition these images are called *ideas*. The self, or the "subject" of consciousness is presented as located, as it were, behind the mirror, surveying the representations which it presents to him. (Imagine that the images appear somehow on the *back* of the mirror).

The Cartesian position is a form of dualism. The dualism has two dimensions. The first is the dualism of mind and body, the dualism which generates the metaphysical problem of the correlation of mental and physical states and the question of how there can be interaction between the two. The second is the dualism of image and object, which creates the epistemological

problems of how our ideas can be like the objects they supposedly represent and whether we can know reality as it is.

The dualism is not so much a dualism of two *parts* of a person, his mind and his body, but a dualism of two *worlds*. The first is the "object world" of material bodies in space, the external world "out there." The second is the "inner" world of the subject, or self, surveying his ideas from behind the mirror. For our purposes, what is crucial is the way in which Cartesianism portrays the world of the subject. The Cartesian self has three principal characteristics: it is self-contained, self-sufficient, and ready-made.

The idea that the self is self-contained follows from the Cartesian's allegiance to two tenets. First, the Cartesian holds that the self is incapable of direct contact with material things. The self can only be aware of objects indirectly, in so far as those objects are presented to it in ideas. Objects in their brute physicality are "indigestible" to minds. This is because the Cartesian represents the external world in itself as devoid of meaning, and minds are only capable of dealing directly with meaningful entities. *Mental* objects, according to the Cartesian, are intrinsically *representational* phenomena - they present the world as being a certain way - and are thus fit to play the role of the immediate objects of thought. So, for the Cartesian, an object can be present to the self only if it is translated into an idea. Second, the Cartesian holds that ideas are private, each self's ideas are revealed directly only to it. It follows from these two tenets (which are both based on plausible intuitions) that the Cartesian self is acquainted with the material world only via its ideas and only *it* is directly acquainted with those ideas. Thus, each Cartesian self lives in an entirely self-contained world. It is as if we each inhabit our own private picture show.

In its self-contained mental world the Cartesian self is entirely self-sufficient: each self is essentially independent of all others. For, since nothing (including no other self) can affect the Cartesian self except by becoming an object of its thought, its capacity to think must be something it possesses prior to and independently of its interaction with other selves. Its self-sufficiency encourages us to think that the Cartesian self comes ready-made to think. The capacity to think is, for the Cartesian, something which a being either has or lacks, it is not a capacity a being may develop.

We are now in a position to see how the Cartesian's extremely individualistic picture reduces theses (A) - (C) to banalities. First, the self-containment of the Cartesian self grants the concept of material activity no place in the explanation of the nature and origin of consciousness. The Cartesian self inhabits a world in which material activity is impossible, for thought is construed as a relation between the self and mental entities, ideas, which are not possible objects of material activity. The Cartesian self is a contemplating rather than an acting being. And in so far as it does act, it acts mentally, for material activity is confined to a space beyond the frontiers of the mind. Second, the combined properties of self-containment and self-sufficiency accord no role to other people, or to the social world in general, in the explanation of either the capacity to think or the constitution of our thoughts. On the Cartesian picture, there can be no substantive sense in which our minds are located in a public space, or in which our mental functions are derived from interaction with others. And third, if we must think of the self as an entity ready-made to think, then internalisation cannot be the process of the *genesis* of consciousness, as the coming-into-being of the mind. The Cartesian conception thus rules out the possibility of strong readings of the claims of Soviet communitarianism. By so doing, the Cartesian relegates material activity and social interaction to the status of mere "external conditions" of consciousness, and, as such, they play a role of little interest to the philosopher. Of course, the Cartesian will say, human beings do, as a matter of fact, acquire mental states in activity and social relations, but this is a fact about the historical antecedents of our thoughts, rather than about the nature of the thoughts themselves.

Thus, the Cartesian picture strongly reinforces the objection we've been considering. If it's correct, there will indeed be no way of understanding theses (A) - (C) which renders them both true and philosophically interesting. Cartesianism, then, is the enemy.

We now know that to give a philosophically substantial interpretation of Soviet communitarianism we must jettison the Cartesian conception of the self. On the basis of my sketch of Cartesianism you might feel that to reject it would be not difficult. This is not so. When I said earlier that Cartesianism dominates Anglo-American philosophy, I did not mean simply that the majority of analytic philosophers are Cartesians. Rather, Cartesianism dominates our philosophical culture in that it dictates the very terms of

philosophical discourse. The Cartesian framework determines the questions philosophers ask, the methods with which they address them, and (to a large degree) the answers they give.

To substantiate this bold claim would require a lot of argument. Here however, is an illustration germane to the present discussion. It would seem at first sight that the obvious alternative to Cartesianism is a form of psychological reductionism. Simplifying, we can say that reductionist theories come in two varieties. First, those which attempt to analyse mental states in terms of brain states, arguing that the mind is just the working brain. Call this strategy "physicalism." Second, those which analyse mental states in terms of the overt behaviour of the subject. Call this strategy "behaviourism." Are either of these approaches attractive to the Soviet communitarian? The short answer is "No." Soviet communitarians notoriously dismiss both forms of reductionism as a failure. But what is especially interesting about Ilyenkov, Mikhailov and Vygotsky is that they argue that reductionism fails even to be an alternative to Cartesianism! They maintain that though physicalism and behaviourism reject the Cartesian's "substantialism" (that is, the idea of the mind as a special non-material substance), both endorse other malignant aspects of the Cartesian framework. They argue that physicalism, on the one hand, continues to endorse the Cartesian conception of the self: it accepts the idea of the self as a self-contained, self-sufficient and ready-made thinker of thoughts and tries to interpret these properties of that self as properties of a physical system. Behaviourism, on the other hand, accepts the Cartesian's mechanical conception of nature, i.e., of the other half of the Cartesian's dualism, and tries to explain mental processes by principles analogous to those which govern the physical interaction of material objects. What is interesting here is not so much the claim that reductionist strategies won't work, but the idea that reductionism is in fact defined by the position to which it is supposed to be an alternative. Reductionism, as Ilyenkov might have said, is dictated by the "logic" of Cartesianism.

So, where are we? First, we know we're looking for an alternative to the Cartesian conception of the self, and that the standard reductionist alternatives won't do. Second, we know that the rejection of Cartesianism is a very radical project. If Cartesianism does fix the terms of discourse in our philosophical tradition, then its rejection may require us to redefine philosophy

as a discipline. Furthermore, the consequences of its rejection may not be confined to philosophy alone. For example, it might be argued that the Cartesian conception of the self exerts a powerful influence on Western political and moral thought, that the self-constituting, "atomistic" individual of Western liberalism is just the Cartesian self under another guise. So dismantling Cartesianism may demand that we rethink the nature of moral and political agency.

So, with a due sense of the magnitude of our task, let's turn to the Ilyenkovian alternative to Descartes.

Ilyenkov, the "Ideal," and the Socially Constituted Subject

While the Soviet communitarians often voice hostility to Cartesianism, it is rare to find in their writings a fully fledged *argument* against it. Such an argument can, however, be extracted from Ilyenkov's works. For Ilyenkov, the achilles heel of Cartesianism is its account of how it is possible for the world to be an object of thought. This is a very esoteric question. To put it another way: How is it possible for us to experience and to think about a world which exists independently of our thought and experience? The Cartesian's answer, as we have seen, is that the objects of the "external" world are given to the mind only via mental entities, ideas, which represent them to the mind. The reason is that minds can only deal directly with objects which are intrinsically meaningful and, for the Cartesian, material objects are devoid of meaning. Thus, the world may be only a possible object of thought if it is translated into a representational mental medium, ideas.

Ilyenkov would argue that this Cartesian theory of how the world gets to be an object of thought is a disaster. For as soon as one argues that the mind is only indirectly aware of external objects in virtue of its direct awareness of internal objects (ideas), one cannot avoid a catastrophic form of scepticism. This scepticism is not the traditional form of scepticism about the external world, i.e., "If we are only acquainted with the external world via ideas, then we can never know whether the world is really the way our ideas present it as being." It is an altogether more venomous form of scepticism. The Cartesian picture leaves us unable even to form a conception of what a mind-independent object might be like. Consequently, we can't even ask the traditional sceptical question of whether we can

know that our ideas represent the world correctly, because we cannot even know what it would be for there to exist a mind-independent world for our ideas to represent. I shall not pursue the details of this argument; the crucial point is that what's wrong with Cartesianism is its theory of how it is possible for the world to be present to the mind.

Thus, the onus is on Ilyenkov to provide an alternative account of how the world becomes a possible object of thought. And it is in developing this account in his "theory of the ideal" that Ilyenkov's distinctive contribution to Soviet philosophy consists. What, then, for Ilyenkov, makes the world a possible object of thought? Interestingly, Ilyenkov agrees with his Cartesian opponent that there is a problem about how an object with only physical properties can be the kind of thing which interacts with a mind. And he also agrees that this problem derives from the fact that for a mind to experience, or think about, an object, that object must have a certain meaning, or representational significance, i.e., it must be, as it were, present itself to the subject as an object of a certain kind. However, unlike the Cartesians, Ilyenkov denies that the only objects that can have representational properties are mental objects, or ideas. He believes that material objects themselves can objectively possess the properties necessary to make them directly accessible to minds. These properties are themselves not material in nature. Ilyenkov calls non-material properties "ideal" properties (ideal properties include, for example, as well as meaning, the various species of value). Ilyenkov's idea is that if material objects objectively possess, as well as their natural (physical) properties, *ideal* properties too, then they *would* be the kinds of things which could be directly present to the mind.

How do material objects acquire the ideal properties which make them suitable objects of thought and experience? For Ilyenkov, it is this question to which activity is the answer:

It is precisely production (in the broadest sense of the term) which transforms the object of nature into an object of contemplation and thought. (Ilyenkov, 1974, p. 187)

Thus, on Ilyenkov's picture, objects acquire ideal properties in virtue of human activity, through their incorporation into social practices. He writes:

'Ideality' is rather like a stamp impressed on the substance of nature by social human life activity; it is the form of the functioning of a physical thing in the process of social human life activity. Therefore, all things which are included in the social process acquire a new 'form of existence' which is in no way part of their physical nature (from which it differs completely); an ideal form. (Ilyenkov, 1977, p. 86)

And it is to this "ideal form," impressed upon nature by human activity, to which the objects of the natural world owe their status as possible objects of thought.

How can we begin to make sense of this? Well, Ilyenkov invites us to consider the nature of an artifact or created object, say, a pen. The pen is certainly a material thing. But, how do we distinguish this thing's being a *pen* from its being a lump of material stuff? To put the question another way: What would an account of this object in purely physical terms fail to capture? Ilyenkov would say that the object exists as an artifact in virtue of a certain social significance or meaning with which its physical form has been endowed, and it is this fact which would be lost in any purely physical description. It is this significance which constitutes the object's "ideal form." Where does it get this significance? In the case of a pen the answer seems clear: the fact that it has been created for specific purposes and ends and that, having been so created, it is put to a certain use, or, more generally, that it figures in human life-activity in a certain way. One might say, with Ilyenkov, that social forms of activity have become objectified in the form of a thing and have thus elevated a lump of brute nature into an object with a special sort of meaning.

Having grasped Ilyenkov's basic idea in the case of artifacts, the next step is to generalise his insight. Ilyenkov, like many Marxists, stresses that man transforms nature in activity. But, for him, this transformation must be seen, not just as an alteration in the physical form of the natural world, but as the wholesale *idealisation* of it: man transforms nature into a qualitatively different kind of environment. Through social forms of human activity man endows his natural environment with an enduring significance and value, thus creating a realm of ideal properties and relations. Ilyenkov presents this realm as the entire edifice of the institutions of social life, created and sustained by the

activities of the communities whose lives those institutions direct. Ilyenkov calls this edifice "man's spiritual culture," and he means it to include the total structure of normative demands on activity which objectively confront each individual in the community defined by these institutions (including the demands of logic, language and morality). It is only against the backdrop of such a structurally organised realm of ideal relations that particular objects - any objects, and not just the ones we create - become endowed with the significance which is their ideal form.

So, for Ilyenkov, man transforms his natural habitat into one replete with social meanings: man creates an idealised environment. And it is in this process of idealisation that the material world becomes a possible object of thought and experience.

Ilyenkov's account of what the world must be like to be a possible object of thought becomes less obscure when it is complemented by his corresponding conception of what it is to be a thinking thing. To be a creature capable of thought is to be able to relate to the world as to an object of thought. Thus, for Ilyenkov, to be a thinking thing is just to be able to inhabit an idealised environment, to be able to orientate oneself in a habitat which contains, not just physical pushes and pulls, but meanings, values, reasons. And to have this capacity is, in turn, to be able to reproduce the forms of activity which endow the world with ideality, to mold one's movements to the dictates of the norms which constitute man's spiritual culture.

The picture then is this. The idealisation of nature by human practice transforms the natural world into an object of thought, and by participating in those practices, the human individual is brought into contact with reality as an object of thought. Each child enters the world with the forms of movement constitutive of thought embodied in the environment surrounding him or her, and as he or she is led to reproduce those practices so he or she becomes a thinking being, a person.

If Ilyenkov's theory of the ideal is sound, it immediately justifies a strong interpretation of theses (A) - (C). Take (A). On Ilyenkov's account, activity - the material transformation of nature by man - is not a mere empirical precondition of consciousness, but a necessary condition for its very possibility. For activity explains both how the world can be a possible object of thought, and how there can be a creature capable of thinking about it. And further, on Ilyenkov's position,

activity becomes literally constitutive of thought, for (1) he construes the capacity to think as the capacity to act in accordance with the dictates of an enculturised environment, and (2) he identifies thinking itself (in its primary sense) as a species of activity. "Thinking," he writes in *Dialectical Logic*, "is not the product of an action but the action itself" (Ilyenkov, 1974, p. 25). Thus the concept of activity becomes, for Ilyenkov, the basic "unit" of analysis of consciousness - the key concept in the explanation of its nature and possibility.

Once we conceive of thought, as Ilyenkov suggests, as "a mode of action of the thinking body," then it becomes possible to see thought, not as an event in a private, inner world of consciousness, but as something essentially "on the surface," as something located, as Volosinov (1973, p. 26) says, "on the borderline between the organism and the outside world." For thought, on Ilyenkov's picture, has a life only in an environment of socially constituted meanings and its content is determined by its place within them. Thus Ilyenkov leads us to a strong reading of thesis (B): the higher mental functions are constituted in social space. Thought literally is "not in the head."

Further, Ilyenkov's position accords the idea of internalisation a very strong role. For Ilyenkov, the capacity to inhabit an idealised environment is not something the human individual possesses "by nature." We enter the world incapable of the activities which constitute thought, and learn to reproduce those activities only in so far as we are socialised into the practices of the community. As we appropriate, or "internalise," those practices so we are transformed from an epistemically blind mass of brute matter into a thinking being. Thus, on Ilyenkov's picture, inauguration into the community's mode of life must indeed be seen as the process in which the individual mind is *created*.

Ilyenkov offers us a way to resolve the supposed ambiguity of claims (A), (B) and (C) in favour of the stronger interpretation of all three. And this he achieves by ousting the Cartesian's individualistic picture of the self for a theory which represents the individual as socially constituted in a very strong sense. For this is an individual who acquires the very capacity to think only through inauguration by a community into the social practices which constitute "man's spiritual culture," the setting which represents the sole environment in which a being can express itself in thought. On Ilyenkov's theory, the human essence indeed becomes the "ensemble of social relations." We have arrived,

then, at the Soviet communitarians' picture of the socially constituted individual.

Conclusion

What are the consequences of taking Ilyenkov seriously? First, the consequences for philosophy. If it is correct that the organising principle of our philosophical culture is a conception of the self which is fatally flawed, then philosophy faces the awesome task of completely rethinking its purposes and methods, the questions it asks and the answers it gives. Whether or not one is attracted to the Ilyenkovian alternative to Cartesianism, he, and the other Soviet communitarians, do at least give us an idea of what a non-Cartesian theory of the mind might be like. The communitarians' suggestions for such a theory must be seen not as a definitive account of consciousness, but as the opening move in a debate. And this debate will proceed, I hope, not just within and between Soviet traditions of thought, but between Soviet communitarians and those elements within our philosophical culture which, largely under the influence of Hegel and Wittgenstein, have recently begun to articulate deep dissatisfaction with the prevailing Cartesian orthodoxy. The time is ripe for new and productive dialogue between Soviet and Western philosophers, so long estranged from one another, but now intriguingly sharing a community of concerns.

Second, Ilyenkov's work has important consequences for the tradition of Soviet communitarianism itself. It sets an agenda for future theoretical research. For example, if Ilyenkov is right that the communitarian conceptual framework demands that we conceive of thought primarily as a species of activity, then phenomena the Cartesian finds easy to explain suddenly become problematic. For instance, the Cartesian can make excellent sense of the phenomenology of consciousness, and of the privileged access we each have to our own mental states. How can Ilyenkov, with his insistence on the "externality" of thought, account for such "subjective" phenomena? Ilyenkov's work itself, I think, offers no direct answer. However, the communitarian tradition clearly possesses the resources to address this question. It will be the Vygotskian idea of internalisation which will bear the explanatory burden in any communitarian account of the inner dimension of our mental lives. So, Ilyenkov's work puts the development of a thoroughly non-Cartesian conception of internalisation at the top of the theoretical agenda.

Finally, we come to the consequences of all this for the study of communication. Clearly, Ilyenkov's work deals with some of the central concepts of communication theory. His account of the ideal is really a theory of the origin of meaning, and of how our mental lives are mediated by the presence in the world of socially significant ideal properties. Further, his notion of an "idealised environment" may cast light on the idea of a culture. So Ilyenkov's work provides a framework in which to reexamine the concepts of meaning, mediation and culture. But much more dramatically, if what Ilyenkov tries to do with these concepts succeeds, then his work establishes that the conceptual framework of Soviet communitarianism is indeed available as an "innovative and distinctive model" for the study of communication. Significantly, this framework does not just make the development of a new interdiscipline attractive, it makes it unavoidable. I've spelled out how Ilyenkov's position justifies a strong interpretation of theses (A) - (C). It should be obvious, however, that it does the same for the theoretical insights (1) - (4) with which I introduced Soviet communitarianism. For Ilyenkov, thought necessarily exists in the form of its expression, that expression necessarily presupposes a socially-constructed culture (i.e., an idealised environment), and entrance into the culture is a necessary condition of consciousness. And it follows from this that the study of mind, of culture, and of language (in all its diversity) are internally related: that is, it will be impossible to render any one of these domains intelligible without essential reference to the others. But if this is so, then it won't just be a good idea to combine the study of psychology, sociology and language, it will be absolutely imperative to do so. The development of an interdiscipline which seeks to grasp mind, culture and language in their internal relations will be essential if we are to understand the human condition.

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Explorative Learning in the School? Experiences of Local Historical Research by Pupils

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Background

MIS, Man in a changing society, started as a research and development project financed by the National Board of Education in Sweden. Its aim was to promote research in the school by the pupils themselves, using historical source material, especially the parish records (which in Sweden are extraordinarily abundant and long ranging), and by using computers. The idea was to make use of the Demographic Database of Umeo and Haparanda (DDB).

However, the basic premise of the project, the use of material from DDB, had to be abandoned. For technical reasons it was impossible to get access to the vast amount of data stored in DDB. From the horizon of the MIS project the "large scale computer philosophy" turned out to be a flop. That implied a crisis in the project, and forced us to reformulate its aims and directions.

We can summarize the idea of the project, which then had to be worked out in more detail, both theoretically and practically, in three phases:

1. Explorative learning
2. The history of the many
3. Modern techniques

In order for the character of the project to be quite clear to the reader, we think it is necessary to explain in some detail its emergence and growth as an offshoot of a social discovery. We will return to that point later. Here it suffices to point out the close

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connection between MIS as a Research and Development project, and the larger enterprise in Swedish society of discovering and exploiting the historical gold mine that the parish records actually constitute. From this point of view, MIS is not restricted to a pedagogical school project.

The history of the records of parochial civil registration can be traced all the way back to the early 17th century. In 1608, Archbishop Olaus Martini ordered the clergy to keep records of baptisms, marriages and betrothals. This order was sporadically complied with. As a result of the Reformation, Martin Luther's Short Catechism became the national ABC book in Sweden. People were now to read the word of God for themselves. This came as a challenge to the prevailing Latin exegesis. The Catechism became the fulcrum of a literacy campaign headed by the clergy. The results of this campaign were recorded in special rolls in connection with the annual examinations on the Catechism. One by one, the parishioners were noted down together with their knowledge of Christianity.

Church records were standardized through the 1686 Ecclesiastical Law. They were now made to include more details concerning the individual. As a result, we are now in good position to find out about the individual person throughout the entire 18th and 19th centuries. The house examination rolls are most detailed of all. Special rolls were drawn up to record births and baptisms, marriages, migration to or from a parish, and deaths and burials.

Of course the efficacy, persistence, and accuracy of the clergy's parish record keeping cannot be separated from the interests of the expanding Swedish national state in keeping control of taxes and levies. The unique source material had its prerequisites: The deep rooting of the lower clergymen in the local administration of the rural villages in combination with a powerful and centralized state power. And it had its costs - a control by the authorities that makes the hitherto modern data banks look like *Candide*. Thus the records tell not only stories about all the individuals registered, they also reveal a lot about the quality of the state and the authorities.

Parish records contain abundant information about the individual people living in Sweden over centuries. As research material, these records can shed light on various aspects of human life and societal forces. In recent years, several research publications

have drawn on parish records as a source of information concerning such matters as the historical development of literacy, emigration, soldiers, infant mortality, the ravages of tuberculosis down to the present age, and hereditary diseases, to mention but a few examples.

Parish records have been consulted by individual scholars, family genealogists and authors in all ages. But the development of computer technology causes the research community to focus new attention on the mass information which records have to offer. Following the example of literacy research done by Egil Johansson since the mid-1960s (Johansson, 1987), the current interests of archives and universities were grouped together in a more general process of computerizing parish records for archival, educational and research purposes. DDB was established for that purpose in 1973.

However, DDB is only intended to be a research laboratory, consisting of a theoretical sample of about 60 (out of 2400) parishes, and restricted to the period of the 19th century. So what about the accessibility of the larger part of the parish records? The increasing interests in the records became a threat to the physical standard of the church books; they ran the risk of being worn out. To prevent that, microfilms of the records were copied, and in recent years work on transferring these microfilms into microcards has been done, mainly in order to increase access to this incredible vein of historical information.

The Nature of the MIS Project

Explorative learning. Our point of departure is that everybody can do research in one way or another. The pupils can ascertain facts and draw conclusions which have not previously been presented in books and articles. In this sense pupils and teachers can conduct their own research. However, in our science-believing societies, the word "research" has an aura of Holy science, and research activity is mostly delegated to professionals. Of course the production of general public knowledge is not an easy enterprise, and is presently reserved for the elite. The others are offered educational programs to learn parts of that expert-produced knowledge. Nevertheless, there are good reasons not to draw the demarcation between learning and research too sharply and definitely; historical phenomena do not exist forever. It is even a point to strive for overcoming that abyss.

The expression, THE HISTORY OF THE MANY, is intended to highlight two ideas. First, we have in mind the fact that not only kings, magnates and other prominent persons make history, though you can get this impression from traditional textbooks. What we aim at has also been termed "history of the common people" or "history from below." Second, we are convinced that not only professional historians, but also laymen like genealogists, local historians, and even teachers and pupils as well, can make substantial contributions to the telling and writing of history (provided an alternative organization of knowledge generation).

MODERN TECHNIQUES. As has already been suggested, a not insignificant part of the rapid development of archives, libraries, and museums is the result of technological inventions caused by microcards and, especially, computers. Herby, the availability of the source material increases, and a more widespread research activity (including explorative learning in schools) becomes possible.

As a consequence of the failure in reaching the parish records data of DDB, a technique of building data bases for PC's was invented within the MIS project by Bengt Grensjö. Technically, it is a data base program adapted to the parish records, but it also contains a data base program of general character. However, it is not only a technical program, it is a practical vehicle of the "MIS pedagogical program."

The main lesson we can draw from the problem of DDB, is that the computer technician and the researcher preferably should be united in one and the same person. (Practically, this is also sufficiently manageable on the PC level.) If not, there seem to emerge two different wishes and needs separated by a gulf. It is an understatement to say that such a state will complicate the matter.

The Committed-to-Memory program (CTM) consists of software, a small exemplary data base (for exercise), and a textbook. The aim is for users to build their own local data base, and use it in research work. CTM permits a more general approach so that the limits of DDB and the 19th century and the 60 parish sample can be overcome. But on the other hand it requires building one's own data bases, implying a lot of work. In the continuation of MIS, we try to facilitate this work and coordinate it by constituting a club of data base builders/users. (Up to now there are 5-10 such building groups in Northern Sweden.)

A prerequisite of CTM is knowledge about the source material and the conditions of its coming into being. That is acquired by building (a part of) a data base. CTM helps to inspect individual cases as well as statistical means. As a matter of fact, one of its advantages is precisely this possibility of back and forth comparison of particulars and generals.

MIS is a research and development project. Developmental work has predominated, and is being conducted by the project team, who are affiliated with the University, in collaboration with teachers and other school staff. This produces an encounter between two poles of knowledge, representing the University and the school sector respectively. The first of these poles mainly contributes knowledge about the research process, historical studies, sources, modern techniques, and educational processes. The other pole, comprising the pupils, teachers and school staff, is closely familiar with learning, teaching and the practical school work. This encounter generates the tangible content of the project, which varies from one class, age level and school district to another.

The developmental work included in MIS has resulted among other things in the actual school routines which the participating classes have developed. This can be termed a semi-spontaneous process, with the University presenting a selection and classes deciding what teacher and pupils are to concentrate on.

As can be seen, MIS is not a teaching experiment, as no direct interventions in the classrooms were made. Instead the work has been indirectly (there are a few exceptions to this rule to be exact) by educating the teachers and giving them hints and suggestions.

As already mentioned, MIS started as consequence of a societal discovery of the usefulness of the parish records and their "modernization" by microcards and computers. In its turn, this is part of a larger tide of using the archives in general more efficiently. This participation in a societal movement makes the character of MIS a little "fuzzy" and "unlimited." This is the way MIS was born, and we have deliberately let it be developed in this direction, which of course implies some drawbacks, among others that the D-side of the R&D project has been permitted to dominate in the sacrifice of reflection and research, and that the outcome is not so clearcut. (What has really been achieved, and what role did the MIS project play?)

This paper is intended to give an overall picture of the MIS project. Observations in the classrooms and interviews with pupils and teachers have been described in several issues of the project journal, and will not be reported here, save as illustrations at some points. We hope this definition of the "genre" of our story will serve as a reading guide.

Accomplishment

In two areas of the northern part of Sweden, the districts of Umco and Sundsvall, in total 14 school classes (four grade 4-6, nine grade 7-9, and one senior high school) and corresponding teachers have taken part in the developmental work of MIS. The project team had close cooperation with these partners. In the beginning a great effort was invested in educating the teachers. They learned about several types of archives and historical source materials. They learned to know the staff of libraries, archives, museums and the university, as well as "lay specialists" in genealogy and local history. Discussions on how to do research in the school were held, and tips and experiences on what to do were exchanged.

The specific content of the children's investigations was shaped by the teachers, who knew more than anybody else about the children and local conditions. This in turn made the research environments extremely variegated.

The MIS idea seemed to be spread by the wind. Soon the project team had a lot of requests for lessons and workshops, far exceeding our ability to meet them. Therefore we decided to establish a project journal, where experiences could be summed up, advice given about suitable historical source material for use in school, problems discussed (for example, how to connect "small" and "large" history and avoid theoretical shortsightedness), etc.

In addition to the genuine project classes and teachers, (several hundred) others have been inspired to try the "MIS way of working" in the school supported by the above mentioned shorter training, the project journal, and smaller assistance from the project team (telephone, letters, visits).

OUTCOMES

Reception. One indicator of the "efficacy" of MIS is the acceptance that MIS has met from teachers

and pupils. If teachers choose the MIS way of working in the school, it seems reasonable to regard this form of "learnability" as an assessment of MIS in relation to the discipline from the point of view of the teacher. (The motives of the pupils for accepting MIS can more easily be called in question, if there is no further evidence brought forward.) The positive response of the teachers to MIS beyond question. In round figures, 50 teachers have participated in two-week courses, several hundred have taken part in workshops (half day or full day), each issue of the project journal is "subscribed to" by almost 1000 teachers. As an expert group commissioned to assess the MIS project wrote: "The interest among teachers as well as pupils has been broad and the response of the school community in Northern Sweden almost overwhelming." (Report, p.4)

This line of argumentation is strengthened by the fact that the teachers interest in MIS was long-standing. In the case the teacher finished the "MIS-working" or gave up after one or two years because the work involved was too demanding, requiring extraordinary planning and preparation.

The attraction of the MIS investigative working approach as a method for learning appears to be supported. From this perspective, concerning the outward side of explorative learning so to speak, MIS has been successful. The existence of a corresponding psychological or cognitive side is not so easy to establish. Again we have the judgments of teachers pointing in that direction. Also the witnesses of pupils and classroom observations indicate, on the whole, a positive pedagogical output. From a developmental work perspective, this seems evident and can be regarded as enough, but of course not from a theoretical or scientific point of view.

In this connection, let us say a few words about the other ingredients of MIS - the history of the many, and modern techniques. Although the emphasis of this paper is on explorative learning, there is no sense regarding it in isolation from the contents and methods of learning.

MIS was not able to develop a more systematic use of computers in the school classes. (This aim was, in the beginning anyhow, probably the ultimate aim of the authorities supporting the project.) There are several reasons for this. One reason is that the project team reacted against what we thought was the excessive technological campaign on computers in school at

that time in Sweden. As an alternative we argued for a pedagogical perspective: learning by research work is the important thing, what instruments are used depends on the subject matter and is subordinated to research and pedagogical purposes. The second reason was the previously mentioned output problem at DDB. Seven school classes did not use computers at all.

"The history of the many"-direction of the project was consequently followed up. All pupils involved in the project did in some way or another explore local historical events. As this was the content of the project it was inevitable. By what means and at which scope and depth it was accomplished differed of course. The most outstanding outcome of the studies was a "MIS model" for "conquering" history. It is based on experiences of classes in various schools, and at first evolved for work in grades 4-6, but has since been applied at all levels. The standard variant goes like this. Grade 4 studies "our family," with the children investigating their family history and compiling family trees. In grade 5 they go on to interview their grandparents and construct a "time strip" for their locality, Sweden and the world. In grade 6 they continue their journey back in time. The 19th century is conquered with the aid of parish records (through the medium of microcards and computers).

This "MIS model" was not preconceived. It has evolved as a result of nearly three years' practical experiences in several classes (thereby supplying the content which the project environment implies). The basic idea was invented by a teacher at the intermediate level, but was then complimented and restructured by other teachers. The essential thing is that it emanates from the pupils' personal history and moves backward in time from the present (to parents' time, grandparents' times and the 19th century) and goes outwards (from "our family" to the local community, going on from there to Sweden and the world at large). (In one way this model is contradictory to the instructions in the Swedish compulsory school curricular, since history is learned from the present backwards.)

MIS - More Than a School Project

MIS is not restricted to the domain of the school, though it is there we have the point of departure and base. From the beginning others interested in knowledge have contributed to the work: employees at museums, archives and libraries, parents, grandparents, geneologists, local historians, retired people,

researchers at the University (outside the project team), and others. We have named it a cooperative way of working.

Forms of working and relational nets are not separated from the content of the project, its "mind" or aims. Probably, it would not be wrong to say, that in the continuation of the practical activity developed within or around MIS there is a vision of a societal generation of knowledge and learning. Here the contours of that vision will be outlined. We regarded it as an important outcome of the MIS project. Of course, it is not an outcome resulting independent of our efforts. It is not a "scientific result" of the project. The efforts of the project team have contributed to the result, but also the efforts of who knows how many others? In that sense it is the "spirit of the age" that works through us. We are part of a societal movement regarding education, and we give our contribution. The project team has had the advantage of coordinating activity, developing methods, and discussing the future. We can depict the outcome as in Figure 1 (next page), and will comment on it according to the numbering.

The societally organized generation of knowledge (1) is always in the melting pot. There are more established forms, and there are "heretical" ones. Both forms find their *raison d'être* in what will be termed "the living organizing of knowledge" (and it can be added: of skills, attitudes, feelings) (2). Our point is that the living process of organizing knowledge is a process where people act together by talking, listening, pointing, gesticulating (besides reading and writing). This aspect of the activity is the central part in the acquisition of "tacit knowledge", a basic component in the scientific enterprise, as has been described by Kuhn (1962). Below we will discuss this phenomenon in the terminology of activity theory, and argue for the paramount significance of the "intimate collective subject" in this process. Here it suffices to emphasize the living character of knowledge production in opposition to the long-standing ideas of positivism and Popperism.

In our time the struggles about what can be seen as acceptable knowledge are numerous and bitter. As you enter the scientific scene, you are part of this drama, whether you like it or not. MIS is of course no exception. There are several ways of describing the positions in the scientific struggles, we borrow a distinction we find useful from Nakayama (1981), a distinction between academic science, industrialized

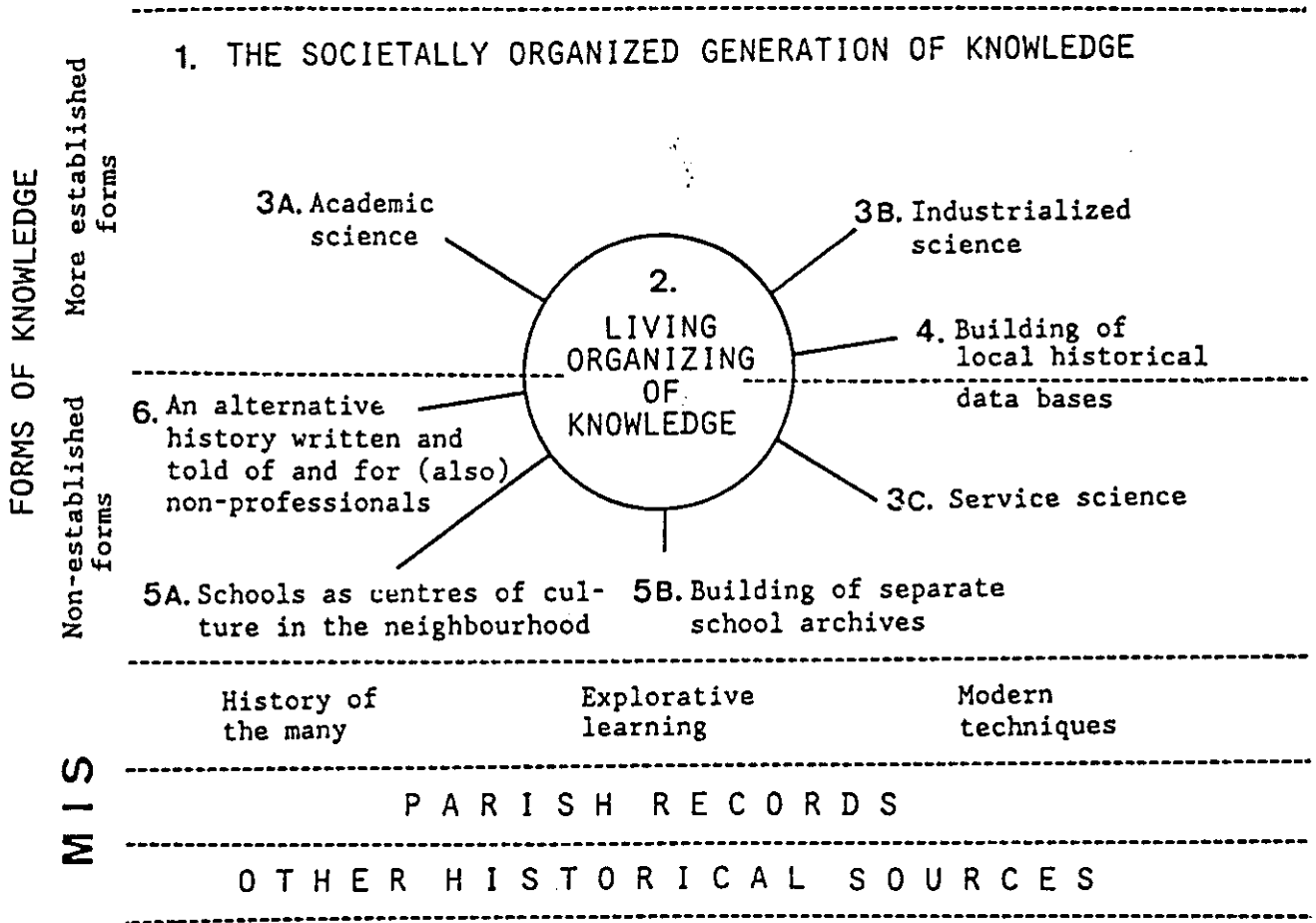


Figure 1. The vision and reality of learning and generation of knowledge in and beyond the MIS project.

science, and service science (3a-c). Nakayama compares the three types of science according to assessors, motives, referees and examiners, rewards, values, forms of presentation, organizational configurations, and other aspects. The crucial difference between the three types of science is located by Nakayama in the first aspect: "the social mechanism by which each is assessed" (p. 86). And the assessors are respectively peer review, sponsor, and general public.

"science as pedagogy" (title of a book by Regi Enervstedt, 1971). George A. Miller (1969) has discussed it as a way of looking at "psychology as a means of promoting human welfare." He says: "I believe that the real impact of psychology will be felt, not through the technological products it places in the hands of powerful men, but through its effects on the public at large, through a new and different public conception of what is humanly possible and what is humanly desirable" (p. 1066). MIS has attempted to work in this spirit.

For MIS' part a project journal has been developed intended for the general (teacher) public. It contains a mixture of genres, from journalistic articles to reports acceptable in academic science, from examples of historical source material to tips of how to work in the classroom. The idea is congenial to the basic project idea concerning means of influencing education through research and development. It has been termed

Building of local historical data bases (4) has been initiated within the MIS project. In two cases it has been realized in cooperation with employment authorities, and preparations are being made to work in different organizational bases (schools, employment authorities).

The benefits of a data base is twofold. First, the computer-organized material can be used for research purposes. This is the part most commonly noticed. There is however another benefit, which is just as important: the living organization of knowledge taking place in the head of the builders and in the collective. This aspect is too easily neglected. At the data base in Haparanda for example, the parish records are prepared, interpreted and registered on a data base, but not only that. Unique knowledge about the parish records and the historical circumstances of their origin is built up too, sometimes documented in articles, pamphlets or reports, sometimes "only" circulating as oral culture. But exactly this oral culture is the base of knowledge generation. If it withers away or is brushed aside, then knowledge becomes abstract and badly anchored in reality. That is the reason why tacit and oral knowledge is that important. Our experience is that data bases without a surrounding of living collective competence run the risk of becoming dead monuments. It remains to be seen how that problem can be handled of the data bases now under construction - will the builders be active parts of a research collective or will they, in name of "efficacy," be only wage earners and nonresearchers?

School as a centre of culture in the neighborhood (5a) is an idea that has been growing within MIS for a long time. The school library and the community library are often one and the same. It can be a meeting place between school and society. Competent adults can work as "counsellors" for the pupils, and grown ups and youngsters can explore history together. School projects can be involved in more wide-aiming investigations. In a couple of schools, there has been a beginning testing of these ideas, sometimes on the initiative of parents, sometimes of teachers.

In a school (one of the few upper secondary taking part in MIS) in the town of Sundsvall, a rather serious experiment has been done for years in establishing a separate school archive (5b). Although the town of Sundsvall has an excellent library, a museum, and several archives, the teachers have found it practically impossible because of schedules and time limits to use these good resources, except on extraordinary occasions. In cooperation with the communal archive, sources selected by the teachers in history have been transferred to microcards for the school archives.

An alternative history, one written and told by and for non-professionals, a history of the many (6), is

a farsighted aim in MIS. The actual outcome of the project in this respect is of course a spit in the ocean; nonetheless the aim exists. The conditions are in a way favourable, as parish records almost spontaneously seem to generate attempts at creating a history of the people. Countless historical compositions have been written of pupils on that ground.

So far a great many visions and some realities of MIS have been presented. Big questions and Utopian prospects - okay, but they exist. To deny them would be academic blindness.

The Fundamentals of Explorative Learning

It is possible to sum up the fundamentals of explorative learning according to MIS' experience in four paragraphs:

1. A condition of explorative learning is the self-exploration of reality, in order to detect what has not earlier been detected (however small or unimportant it may appear to "scientific researchers"). Practically, this implies - in compulsory school and in upper secondary too - empirically based research. In the terminology of Tornebohm (1973a,b), we have to do with "explorative studies." Theoretical (or "synthetic") studies demand an overview and wide reading not attainable on these levels in school, save as extreme exceptions.

2. "Explorative learning" puts the traditional school-learning aside, and establishes new relations among pupils, between pupils and the teacher(s), and between both groups and the object of the studies.

3. New conditions of learning thus emerge, but only as far as the "straitjacket" of the school can be overcome. To us, it is still an open question if it is possible to develop "explorative learning" to a greater extent in the existing school. This has to be tested.

4. When the teacher expresses an "explorative learning-attitude" and himself is using explorative methods, then the pupils often seem to be inspired to "explorative learning." Conversely, teachers that do not research will not have researching pupils.

In the following these four paragraphs will be further developed.

Exploration and pupils. In what ways then are pupils in compulsory school able to do research? Let us consider some arguments from Hakan Tornedahl, Professor of Philosophy of Science in Gothenburg. According to him, the process of knowledge generation has two phases, which perhaps may be depicted as in Figure 2.

Some distinctions involving learning activities can be made with the aid of the concepts in Figure 2. Defined as "motivated learning" (Enerstvedt, 1985), one type of learning activity, namely "authoritative text"-learning, is not depicted at all in the figure, since it only reproduces and does not generate knowledge.

Sometimes the object of learning activity is said to be a change in the subjective structure of the learner. If the learner is not aware of that, but is only the object of others teaching activity, you have this "authoritative text"-learning. In so far as the learner himself is aware of this aim, and has made it his own, his learning activity can be described as being of a "second-order" type (Enerstvedt, 1985). (Some other researchers within the tradition of activity theory appear to reserve the concept of learning activity for this second-order type.)

"Explorative learning" is a learning activity. To the pupils the focus is on how to conduct the exploration, i.e., about methods. A second hand result seems to be a form of reflections about theoretical instruments. Let's look at some data from a 6th grade school class.

CASE 1. A school class, which has done "explorative learning" about 1-2 hours a week for three school years (grades 4-6). At the end of grade 6 the pupils are asked, first, about what they learned in school during the six years they spent there ("school-learning"), and, second, a month later, about what they learned by MIS-study work. There are two striking differences in answers on the two occasions:

1. When talking about MIS a lot of methods are mentioned, but when asked about school learning in general, not a single answer mentions method!

2. There is a kind of theoretical reflection expressed on the second occasion, but not on the first. However, it is not theorizing in ordinary scientific sense, but more similar to what Susanne Langer (1957) finds characteristic of art: configurative and presentational. Answers of the following sort - "Find a lot of

facts and then write down the most important matter"; "And then one can perhaps make additions and perhaps write a story"; "and then you can let imagination play its role" - indicate active productions, which need analysis, structuring and creation of wholeness.

Pupils can, we believe, be researchers in two ways. One by doing ordinary research: choose a problem, investigate, interpret the outcome, and bring the results to the public in reports. It is hard to imagine this sort of activity among pupils in the compulsory school, although it can occur on rare occasions.

Within the MIS project we had one such exception (or almost one; we helped the youngsters in the last mentioned step).

CASE 2. Two boys in the 8th grade had decided to study the history of their home village, Degernas. When interviewing an old woman they heard about a grave, which she had found in the 1940s. She went picking berries and then she saw the grave, decorated with a white wooden cross. Earlier she had heard about the grave from an older woman telling a legend: Two Russian soldiers were on their way to Degernas, probably in order to get a horse. Both of them were injured, and one of them succumbed in the forest. He was buried by his fellow, who then went on to the village. At last he arrived there and was taken care of, but later he died. The grave is to be that place where the first soldier died and where he was buried by his fellow. The two pupils calculated where the grave possibly could be situated and began a systematic penetration of the district forest - and found the grave. The finding was reported to the local museum, where they did not know about the grave, in spite of the fact that a few years earlier a memorial inventory had been made in the area.

It is no coincidence that this example of successful research in school is about an "empirical fact". (A proof "from below," according to Figure 2.) Results nearer the theoretical pole of a discipline ("from above"-support) must be extremely rare in a school context.

The other way in which a pupil can be a researcher is as a pupil exploring matters of fact within education. Doing "explorative learning" as we have chosen to term it. What s/he discovers or invents is often not very new if regarded as public knowledge, but there is a core of "newness," and this is the

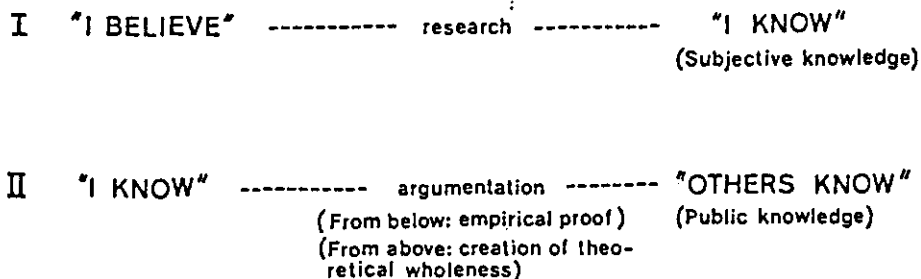


Figure 2. The two phases in the process of knowledge generation (reconstructed after Tornebohm, 1973a,b).

important matter. In learning there is always a combination of old and new matters, a wholly reproductive activity does not exist. The pupils always produce a counter-culture ("illegally," or out of the agenda), which often is unknown. MIS is an attempt to break out of the vicious circle of only reproductive activity. Essential is that the new matter, however tiny it looks, is acknowledged as important and that it will be developed.

As previously suggested, the distinction between research activity and learning activity ought not to be exaggerated. In research you learn, and in (good) learning you do research (in the broad sense of the word). When for example pupils or teachers ask themselves which months are most frequent for marriage in an actual village in the district of Vasterbotten in the 1880s, and by means of CTM find that 60% of the marriages take place in October, November or December (not May or June as expected), and after discussions choose as the most probable explanation that in late Autumn the harvest is finished and the slaughter has brought meat enough for a party. Who can tell in a clearcut way if this is education or research? Or when they put the same question concerning a district in the upper north of Sweden and find April as the favourite

month of marriage and explain it in terms of the tradition of the religious sect of Laestadianism?

Collective subjects in learning and teaching activity.

Traditional school-teaching and learning is grounded on the supposition that the teacher knows the subject matter and the pupils do not. The curriculum specifies parts of the cultural heritage and the teacher's knowledge is to be transferred to the pupils. In explorative learning this does not hold true because no one owns the key to the answers. Therefore, the role of the teacher is different. Who actually is the teacher and who the learner cannot be specified on formal grounds, it will change according to the circumstances. (In the long run the teacher will normally have a lead, of course.)

Let's try to get a theoretical grasp of this phenomenon by using Vygotsky's "fundamental law" of the development of the higher psychological processes as a starting point. It says:

Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual

level; first, BETWEEN people (interpsychological) then INSIDE the child (intrapsychological) ... All the higher functions originate as actual relations between human individuals." (Vygotsky, 1978, p. 57)

Let us go a step further combining this good idea with Kuhn's conception of the learning of or growing up into a paradigm. Thereby, we will, we believe, have a more generalized version of Vygotsky's fruitful ideas liberated from the unspoken prerequisites of traditional school learning and child development which the Vygotskian passage suggests.

Kuhn emphasizes the significance of social intercourse in the acquisition of knowledge. By showing exemplars (ideal standards) of a tradition of science in a tutorial situation or in a seminar, the *umbra* of tacit knowledge is transmitted to the novice. In the absence of this, the apprentice will never be a master. In Kuhn's argumentation a formula congenial to, or anyhow compatible with, Vygotsky's "fundamental law" is suggested:

social intercourse (around exemplars) ---
tacit knowledge --- ---
explicit knowledge.

If the above arguments have substance, then the social process attached to the subject matter (or the social intercourse around exemplars) determines the psychological processes (the knowledge). Thus, the implication is, that if you have a different form of social intercourse (but the "same" exemplars), you have a different human activity and you get different tacit and explicit knowledge. In this way you can see plainly that intellectual knowledge has a prerequisite in face-to-face activity. Thus, the nuances of what is being enacted in the educational setting are of extreme importance to learning and teaching activity.

The "explorative learning"-teacher (or perhaps better: tutor) has to take part in a living dialog. That implies running the risk of not doing well, of losing the shelter of formal authority, but it also means the possibility of acquiring a new authority based on professional competence. In short, it means participating in an activity of knowledge generation on the same conditions as the others in the collective. (For the moment the problem of the demoralizing effect of power on instruction will be ignored; we will return to it.)

Regarded "from inside" it is easy to see the difference between the activity of "explorative learning" and traditional "school-going-activity." The contexts in which these activities are imbedded are also strikingly different. School-going has a 1000 years-old tradition of learning as reproducing texts, implying a view of pupils as immature social creatures who must be filled up with the cultural "basics." Explorative learning, on the other hand, means a societal recognition of the creative learning possibilities of the pupils (and the teachers). In the latter case learning is regarded (also) as contributing to the social production. Corresponding to the difference in learning activity, is the difference between the collective subjects.

It would be misguided to specify a collective subject (and, which is the other side of the matter, a human activity) by a surface-empirical procedure. A school class and a teacher in a classroom do not automatically constitute a collective subject. They might, and if they do, what type of collective subject they constitute is also dependent on their relations to the contextual collective subjects. Let's illustrate what has been said in a figure.

Individuals are parts of several collective subjects, and take part in several human activities. Some of these are of more global character, others are more limited, more "intimate." In learning and teaching the activity is more limited, and thus the collective subject is of a smaller range. In Figure 3 this is represented by (CS/A)S10T (say a small group within the class) and (CS/A)S11T (for example the school class).

We claim with Polanyi (1969), that tacit knowledge is basic to all forms of knowledge. The origin of tacit knowledge is all the activities in which individuals are involved, especially the more narrow, more intimate activity (which of course is coloured or determined by the wider activity; i.e., if the wider collective subjects change, so do the narrow ones). The overall activity and communication is always mediated in a socially "close" way. However, this does not mean, that one cannot receive information by oneself. Obviously, one can, for example by reading. What we maintain is that at some point communication must have a social anchoring, and that this anchoring has a fundamental character. Consequently, social intercourse, face-to-face interaction, is of paramount importance for learning and teaching. Not much is known about this phenomenon so what has been stated here, is to be regarded as a hypothesis.

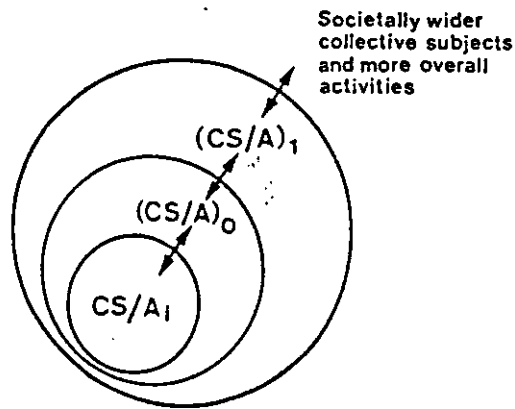


Figure 3. Collective subjects/Activity (CS/A) of learning and teaching and their relationship. (i=individual person; O="intimate," oral; 1= more overall CS/A of learning and teaching.

The "straitjacket" of the school vs "favourable circumstances."

School organization is not designed to promote explorative learning. For that one needs flexibility - in time, room, planning, tutorial assistance, and resources. But schools seem to be crowded with hampering bureaucratic rules, time schedules, shortage of classrooms or group rooms, difficulties in synchronizing the work of the several teachers responsible for one class, and so on. Everybody familiar with schools today knows what we mean.

But this is not the whole truth. Far from it. There always emerge "favourable circumstances" as a "counter-force," if there are teachers or pupils interested in alternative ways of doing study work.

The phenomena of a "straitjacket" and "favourable circumstances" in the school are well known to everybody familiar to the school today. They mirror the contradictions in the school. On one hand a restrictive tradition of teaching and learning, an attempt to domesticate the potential of newness in learning. On the other hand an effort to develop learning into a more creative activity conducive to wider participation. We mention these contradictory forces in order to point out the somewhat self-evident fact that a great deal of organizational work has to be done in order to overcome the obstacles to explorative learning.

The researcher-teacher

One outcome of the project that little by little we accepted as a matter of course is that teachers have to be models and do research work themselves. There are practical as well as theoretical considerations which obliged us to face this reality. Let us first look at some practical examples.

Experience shows that teachers too are seized by the "holiness" belonging to the phenomenon of "research" in our culture. Even teachers who are ordinarily curious, always taking on new tasks, reading and investigating, often start to stutter, when we ask them if they do research or want to do that: "Me, how could I?"

Still, the teachers are more or less forced to do research themselves, because they feel that the pupils are keenly alive to the "climate" or the "mood" of the school class or the group. If the teacher created the impression that there was no need for exploration because it is sufficient to "read up," then there would be no point in talking about the necessity of doing research. Such a teacher would not be believed. Thus, the teachers appear to have felt a pressure from the pupils.

Theoretically this phenomenon is easy to grasp in terms of Vygotsky's fundamental psychological law. If the teacher personally does not mediate the idea of research study work as basic, the pupils will psychologically (as tacit knowledge at least) get the idea of its non-essentiality.

Concluding Discussion

Vehicles of the MIS' educational program. From its start MIS has deliberately used, what we have named, a "cooperative way of working." A network of relations - not only schools, but other institutions as well, and also laymen - were established through personal contacts and, as the project grew, more and more with the aid of the project journal. "Concerning cooperation and financing of the project, MIS is rather unique," was the formulation of the professional group judging the project.

But, of course, a growing movement and a wider societal organization cannot be united without common ideas and aspirations. These were not invented by MIS, only partially so. Instead the project grew as a part of two societal currents. One is regarding learning, and implies an attempt to develop a more active learning activity, an attempt to break the 1000 years old clerical tradition of passive learning, where the activity of reciting the truth of holy or authoritative texts has passed until our time, and is currently living as a basic component of school-learning. (Compare Fichtner, 1985). The other current MIS is part of is striving toward a rapid change of the world of archives by use of new media, especially the computer.

MIS has had the advantage of resources to develop participation in these currents. To mention the most important: theoretical ideas about learning (activity theory) and of data base uses, and about forming an ideological perspective; organization by personal networks and cooperation with a lot of institutions; material by picking up appropriate historical source material, by establishing a project journal, and by invention of PC-programs (besides the already mentioned CTM, also a program which lets you explore "parish life in earlier times," Johansson 1985, by means of a computer picture of the bench-seats in the church of Tuna 1820, showing information, taken from the parish records, about the inhabitants).

As a R&D project MIS aims at knowledge and development. This can be applied in two different ways: (1) by professionals' measures, and (2) by "inviting or suggestive education," "service science," "scholarship as pedagogy"; we are not sure what to term it. MIS aims at (2). What is needed to get a successful project? An answer in the direction of activity theory would be: "advancedness", i.e., work within the societal zone of proximal development (as defined by

Engeström, 1987, p.174). And that's only attainable if (a) a lot of other people's experiences can be utilized for the benefit of the activity, and (b) these experiences are systematized and improved, and (3) new "strategic instruments" are developed (to use the terminology of Engeström, aa), instruments (or vehicles as we prefer to name them), which can be conceptual, organizational or material.

Figure 4 summarizes the most important "vehicles of education" used in the MIS project, showing connections between vehicles of different sorts. MIS is more concentrated on the CONDITIONS of learning and knowledge generation. It is a consequence of our choice of R&D strategy. Our means of influence have predominantly been indirect, implying a regulation of semi-spontaneous processes, more on an intermediate level (if "macro" is reserved for more overall contexts: political, cultural, societal).

It is especially worth noticing the organizational aspect as an important vehicle. Often it is underestimated or ignored in theoretical reflections about knowledge production. A prominent example is Popper's "3 World" epistemology (Popper, 1972). There you find the material dimension (World 1), and, of course, the core in Popper's epistemology, the theoretical one (World 3). The mediation between these two "worlds" goes through "World 2," the subjective world of psychological processes. Remarkable is the complete absence of organizational elements. The central fact that the connection between "World 3" and "World 1" is socio-culturally mediated is totally ignored by Popper, and he consequently ends up in a "Robinson Crusoe epistemology" - the isolated man on the hunt for "objective knowledge." To us, this idea seems absurd. We find that in practical as well as in theoretical contexts a paramount role of social interaction in the collective is always popping up. Groups, organizations, and institutions are important and must be reflected properly, if praxis is to be promoted. These collective contexts of MIS are pointed out in Figure 4.

For the sake of clarity, it may be noted, that the borders between the "lines" in Figure 4 are not fixed. The "club of data base builders/users" is an organizational vehicle not only of orality, and of the particular-general-dialectics in knowledge generation, but also of "explorative learning", and of a "cooperative way of working." Let's use an example to explain what we mean.

CONCEPTUAL	ORGANIZATIONAL	MATERIAL
"Indirect means of influence"	MIS' educational program	Project journal
"Explorative learning"	DDB, SVAR, MIS	Historical source material on modern media (microfiche, computers)
"The importance of dialectics between the general and the particular in knowledge generation; and of oral discussions"	Club of data base builders/users	"Circular letters", CTM, "Parish life"
"A cooperative way of working"	Personal network: schools, archives, University, laymen, etcetera	Project journal

Figure 4. Important vehicles of education in the MIS project: conceptual, organizational, and material. (DDB = Demographic Data Base of Haparanda and Umco; SVAR = Swedish Archive Information, producing microfiche of historical source material; CTM = "Committed to Memory," a historical database program)

The theoretical, organizational, and material elements interact, sometimes in ways far from self-evident. Let us elaborate somewhat an example illustrating this. Paradoxically enough, computers, which can be regarded as constituting the word in its most technologically powerful form, can stimulate and facilitate a more "living word," a richer exchange of ideas, a deepening discussion. On the other hand, the computer is unaccessible, a fact that will be recognized when the computer does not work if not sooner. Then the "technological detachment" to everyday life makes it difficult to find alternative ways of communicating. Say that you, for example, have put numbers into the computer to do some computing, and it malfunctions in such a way that you cannot read what you have put into it or the outcome of the computations. In situations like that, you bless paper and pencil, not to say the (oral) word (by means of which you even give your blessing). On the other hand, the computer-here assumed in the form of a historical data base of CTM-type - enables a rather accessible exploration of historical source material. Which aspects to bring forward and which questions to be answered, are up to the pupils themselves. They will be freer in this interaction than

in the broken dialogue (or is it monologue?) with a book-text. The results produced by the pupils are genuine, not only success at cooked up, secure, lab exercises. The patterns of data generated by means of the computer may be a starting point to research questions: how to understand that difference, how to explain it, etc?

Computers (used in suitable ways of course; there is no guarantee against using them as mechanical teaching machines of the old days) cannot "stand alone." You have to organize dialogues by means of them or around them. Letting the books speak for themselves by reciting them (by heart or more freely) as the presupposed standard way of study work, dictated by the school-tradition, will no longer be a possibility. You can surface-read a text without actually understanding it, and reproduce the text as if you understood it. That's not possible using computers our way. Either you think and discuss and understand, or you and your colleagues must be silent, because there is no way of "lip-reading" the computer.

Shortcomings in MIS

Up to now we have accented the contributions we think that MIS made to R&D work. But naturally there are drawbacks as well, and here it is time to dwell on them.

MIS has received two kinds of well-informed criticism. One is provided by the expert group already mentioned. It points out two missing elements in MIS: a) a failure to measure the outcome of subjective changes; what the pupils have learned and how their consciousness of history have been developed, and b) what the outcome looks like in comparison to a more traditional way of study work in school.

To the a)-criticism we agree. In the beginning of MIS there were plans of documenting subject-effects of learning, but we were obliged to abandon them, when the project grew in extent and acceptance. We had to make a choice between the developmental side of the project and the research- and reflecting side. We still think that we, given the circumstances, made the best possible decision.

To criticism b) we are sceptical. Such an assessment would, as far as we understand it, make use of control groups and should imply a rather large research design. It is questionable if it is worth the trouble. The acceptance of MIS by teachers and pupils under a considerably long period, can, as we have already stated, be regarded as an assessment of the project. The conclusion that the project is successful we think is confirmed. The questions of how and why, however, we think could preferably be approached by means of a more theoretical assessment. Especially, in the perspective dealt with in this article, it would be of interest to study the steps from "intimate collective subjects" in the learning settings to the outcome of learning: concepts, theoretical understanding, attitudes, and skills.

The second criticism concerns the absence of practical considerations about how to arrange scientific oriented instructions aimed at the history of the common man, using new technology. Regarding micro processes of learning and teaching we find this criticism correct. The level of analyses and reflections of learning in MIS is mainly not micro. We have such ingredients, but they do not form a systematic approach, and cannot be used as raw material from which to chisel out a clearcut figure of psychological processes and pedagogical effects.

Here we could have learned considerably from studies of interventions in instruction done in the tradition of activity theory. (For example Thyssen, 1984; Engeström & Hedegaard, 1985) Teaching experiments have their drawbacks too, however, which we would like to avoid. Let us introduce another figure, analog to the preceding one, but on educational micro-level, for further discussion.

The second line in Figure 5 is a way of illustrating the famous theoretical idea of Vygotsky, that if you are going to teach a child, you have to work within the ZoPD, and make use of suitable mediators, acts or material means ("pivots" as they are termed in Vygotsky, 1978/1933). You and the child form a dyad, which thus will constitute the organizational setting. (Perhaps smaller groups and even groups of school class size can do, but theoretically they probably can be understood as consisting of several dyads.)

Anyhow, the gap between intermediate and micro levels in the design of the R&D work of MIS is not out of reason. It mirrors a scepticism against the "itching finger" in pedagogical interventions. It is our conviction that it is a delicate enterprise to organize the learning process in detail (that is, on micro level). You never know what will happen. An encounter always is open to a certain degree. Even if the instruction is made technologically, the learning process will not be so, it will only be extraordinarily misjudged. Learning (more exact: learning activity in the sense of Enerstvedt, 1985; there is biological learning too) is societal. It can only to a small degree - and mainly indirectly - be controlled. That means that pedagogy can hardly be made useful as technology, but rather as a critical scholarship, not only of those directly involved in the teaching situation, but also of wider collective subjects. The society will intervene in the classroom, that is inescapable. Theoretically that means the determination of wider CSs on narrower ones.

Here we are back to the problem of power and learning. Power always tends to infiltrate instruction, making it corrupt and distorted or destroying it. The inscription above the entrance door of the oldest University of Sweden (Uppsala) is unusual in its explicitness, but it says what all institutions of learning anyhow whisper: "To think freely is great, to think the right things is greater."

Yet, it is important to keep in mind the superior position of the "intimate CS" in the learning process. It

CONCEPTUAL	ORGANIZATIONAL	MATERIAL
"Intimate collective subject"	Small group	Various
Zone of proximal development (ZoPD)	Dyad	Pivots

Figure 5. Vehicles of education on micro level.

is there the essentials of learning take place (perhaps in or via ZoPD too, but that is not conclusive to the argument here). In theoretical terms you can say, that in "intimate CS" you have the chance of breaking the determination of the wider CSs and generate something new. The implication of this for the teacher's work is important. The teacher's "transmission of cultural heritage" to the pupils will always go through the vocal culture (Ong, 1967) and the "intimate CS". The teacher will not only be a representative of "World 3," but also a participant in "World O," the original and oral human interactive world (missing in Popper's theory), "man's own personal, social, vocal world," to speak with Ong (1967, p.73). In this "world" the teacher is as vulnerable as the pupils, but also has the possibility of taking part in a living collective.

Explorative Learning in the Swedish Compulsory School?

In one sense it is evident that you can do research in the school. As elements in the regular school work research now and then appears in upper secondary. But if you claim more than that, as we do, proposing research in school not just as rare happenings in school work, but as the pedagogical form that imbues the daily study work, then it becomes controversial.

That research goes its own ways, and is not easy to control from outside (if at all), probably is what makes research in the school a muddle. An explorative way of working as an all-pervading pedagogical precept appears to imply something revolutionary to our school. Why so? What makes research as pedagogy so

alien or threatening? Our guess is: Partly because of the unmanageability of research work, its difficulty to be kept within limits, to be administered, and its always implying some sort of disorder. Partly because it presupposes an alternative figure of thought about learning compared to the prevalent one: learning as creation of something new, rather than as simple transfer of "heritage of culture." Partly because it demands teacher-work to change character. And, last and probably not least important, partly because of fear for what forces can be released.

We do not know if research as pedagogy is attainable in the school. It may turn out, that the most significant processes of learning today will take place outside the school. Perhaps that is the way it should be. Still, we think that the limits of the school should be tested. Why give up the battle before the fight had really begun? That research activity, as an element in school, is working, appears to be established. However, the range of these ingredients, and their gains on different school levels have to be examined.

MIS as a project financed by the National Board of Education existed for a full five years, and is just finished. But as a pedagogical idea, and a current in a practical movement, it continues under the same name. The main organizational platform of continuation is SLIT (Swedish Institut of Local History), recently established in the town of Harnosand.

Two main changes of the activity of MIS will be made. First, MIS no longer will be predominantly a school project. As we have tried to show, it never exclusively was, but now it probably will be easier to

get positive response to the idea of organizing creative learning milieus outside the school. Second, regarding school, MIS intends to focus on the teachers. Bringing it to a head, we say: Without researching teachers, no explorative learning pupils. If you want to work for a wider "culture of research," it seems reasonable to regard the teachers as a strategic resource. But then, so our hypothesis goes, the teachers have to convert themselves into "researcher-teachers." This idea we intend to test practically.

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Theatre as a Model System for Learning to Create

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Introduction

The basic argument of this paper is simple. We maintain that artistic creation can best be understood as a real, sensuous, object-bound, instrumentally mediated and communicative activity, taking place in concrete socio-historically determined but inherently contradictory and mobile forms.

What is the dominant socio-historical form of artistic creation in today's society? The common image

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depicts the artist as a free private producer, working alone and selling his or her products the same way medieval artisans sold theirs. We maintain that this handicraft image of artistic production belongs essentially to the past, though today's artistic practices still have their handicraft layers and elements. The dominant form of artistic production today is that of wage labor, concentrated into large organizations and mediated by a complex division of labor. In contrast to the traditional handicraft form, we call this the rationalized form of artistic production.

When we say that rationalized wage labor is the dominant form of artistic creation, we make no claims concerning the quantitative prevalence of this form. Being the dominant form means being the leading form which determines the current qualitative mode of development.

Film industry is a natural example of artistic production in the form of rationalized wage labor; record industry may be considered as another one. But there is a much older, classic form - namely the theatre. In theatre, we may study the basic developmental features and problems of artistic creation as wage labor in a condensed, 'pure' form. This is why we have taken theatre as the object of the present analysis. Theatre is compact, yet complex. In many respects theatre comes close to being the germ cell or ancestor of the subsequent various forms of artistic wage labor.

The ancestor, as a rule, does not die but continues to live alongside all its offspring as an individual among other individuals, and the problem consists in discovering among the existing separate individuals the one that was born before the others and therefore could have given birth to all the rest. (Ilyenkov, 1977, p. 347)

When we say that artistic creation shall be studied as activity, we mean the total process of the elaboration of an artistic product - in our case, leading to the performance of a play on the stage. In this respect, our approach resembles Howard Becker's (1982) notion of 'art worlds'. Moreover, we see contradictions and conflicts as essential for the understanding of any real activity. As Billig (1987, p. 15) notes, "it is these arguments, lasting months, years and sometimes lifetimes, which contribute to the activity which enables the performers to follow their scripts without argument for an hour or two in front of the footlights".

The theatre company, with salaried personnel and relatively fixed division of labor, originates in the 16th century. Theatre institutions based on wage labor take manifold forms today. However, their differences are not essential for our present purposes, although the empirical material of our paper is collected in Finnish circumstances.¹

Characterizing artistic creation as rationalized wage labor makes people uneasy. Questions arise: Can we seriously talk about creation anymore, in such socio-historical form of activity? What will be the future of artistic creation under this dominant form? Shouldn't we return to the golden ages of free individual artists? What implications does the dominant form of theatrical production have for the learning and cognitive development of those studying and learning for theatre or through drama?

In the following sections, we make an attempt at forming some preliminary tools for elaborating on questions like these. In the second section, drawing upon the work of Stanislavsky and Leont'ev, we'll work out a model and certain instrumental concepts for analyzing theatre as activity. In the third section, we will report and discuss some attempts of theatre professionals to employ our model in the analysis of their own creative work. In the fourth and final section, we'll turn to the implications our conceptualization may have for learning and cognition.

Analyzing Theatre as Activity: Lessons from Stanislavsky and Leont'ev

In the theory of theatre, the classical activity-oriented approach stems from the work of Konstantin Stanislavsky (1863-1938). In the early Soviet theatre, Meyerhold and Vakhtangov were simultaneously followers and adversaries of Stanislavsky. Later two other activity-oriented approaches emerged, namely those of Brecht and Artaud. The three traditions may be regarded as absolutely incompatible with each other. Yet they together, as if *aufgehoben* in a unified triangle, provide the preconditions for envisaging and practically realizing the theatre of the future. But in the present context, we restrict our deliberations to the first cornerstone, Stanislavsky.

Stanislavsky's "system" is well known. In *My Life in Art* (1924) he divides it in two main parts: (1) the inner and the outer work of the actor on *himself*, and (2) the inner and the outer work of the actor on his

part. These two poles are treated in Stanislavsky's subsequent books: the actor himself in *An Actor Prepares* (1936) and *Building a Character* (1950); and the part in *Creating a Role* (1961).

The inner work on the actor himself is based on a psychic technique which enables him to evoke a creative state of mind during which inspiration descends on him more easily. The actor's external work on himself consists of the preparation of his bodily mechanism for the embodiment of his part and the exact presentation of its inner life. The work on the part consists of the study of the spiritual essence of a dramatic work, the germ from which it has emerged and which defines its meaning as well as the meaning of all its parts (Magarshack, 1961, p. 27).

So the fundamental relation for Stanislavsky is that between the actor and the text. The aim is to produce truth. Truth in turn is a presentation which is *believed* both by the actors and the audience. To reach the truth, the actor must merge with his role character, become one with it, literally live through the actions and emotions of the role character. It is not a question of copying life on the stage. It is a question of making and living life itself on the stage. But not just any life. The task is to make and live the life of the play which represents classical, essential features and forces of the human nature. Thus, the actors must turn the text into a truthful performance on the stage.

No part, in fact, can be really successful unless the actor *believes* in it. The actor must believe in everything that is taking place on the stage and, above all, he must believe in himself. But he can only believe in what is true. He must, therefore, always be aware of truth and know how to find it, and to do that he must develop his artistic sensibility for truth. And Stanislavsky makes it clear that what he means by truth is the truth of the actor's feelings and sensations, the truth of the inner creative impulse which is striving to express it. "I am not interested in the truth outside me", he declares. "What is important to me is the truth in me, the truth of my attitude towards one scene or another on the stage, towards the different things on the stage, the scenery, my partners, who are playing the other parts in the play, and their feelings and thoughts." (Magarshack, 1961, p. 22)

The worst enemy of the actor is his tendency to act for the audience - to make theater instead of life. To

avoid this, theatre needs an invisible "fourth wall" between the stage and the audience. The actors must concentrate on their course of action and follow its own logic, forgetting the audience. Only this way the audience can fully merge with the play.

What is so activity-oriented in Stanislavsky's approach? As we know, the *differentia specifica* of human activity is the systematic production and preservation of tools. Stanislavsky made theatre conscious of its own tool production. He made theatrical creation an endeavour not only of producing performances but also of producing instruments for its own perfection at the same time. A long list of such instruments may be found in Stanislavsky's work: the magic "if," given circumstances, imagination, attention, relaxation of muscles, dividing a part into "pieces and problems," emotional memory, communication through "irradiation," and extraneous aids - to name only some of the central ones (Magarshack, 1961, p. 32). None of these is there from the beginning, just to be picked up and used by the actor. They are all instruments to be continuously constructed and reconstructed in the activity of acting.

But the instruments listed above are not yet the most general and powerful ones for Stanislavsky. There are three general instruments that truly possess the status of principles. These are (1) physical actions, (2) the superobjective, and (3) the through action. We'll now turn to a closer examination of each of these three.

(1) Physical Actions

At the very outset of his career, Stanislavsky realised that dramatic art and the art of the actor are based on action. The actor was to act externally and internally, purposefully and productively. However, only toward the end of his life Stanislavsky developed the principle of approaching inner actions and emotions from and through external physical actions.

The creation of the physical life is half the work on a role because, like us, a role has two natures, physical and spiritual. You will say that the main purpose of our art does not consist of externals, that the creation of the life of a human spirit is what it looks to in order to inform what we do on the stage. I quite agree, but precisely because of this I begin our work with the physical life of any part.

(...) This is something material, tangible, it responds to orders, to habits, discipline, exercise, it is easier to handle than elusive,

ephemeral, capricious feeling which slips away. But that is not all. There are more important factors hidden in my method: The spirit cannot but respond to the actions of the body, provided of course that these are genuine, have a purpose, and are productive. This state of things is particularly important on the stage because a role, more than action in real life, must bring together the two lines - of external and of internal action - in mutual effort to achieve a given purpose.

(...) The physical approach to a part can act as a kind of storage battery for creative feeling. Inner emotions and feelings are like electricity. Scatter them into space and they disappear. But fill up the physical life of your part with feelings, and the emotions aroused will become rooted in your physical being, in your deeply felt physical actions. (Stanislavski, 1981, p. 149-150)

The actor has to learn to use his physical actions as instruments for reaching the unity of feeling and doing. Even words become physical tools of action.

The point is that if I had not taken the text away from you, you would have worked too hard over the printed words and would have rendered them without thought, formally, before you had penetrated to the underlying meaning which shapes the line of your role. (...) Let the words themselves become for you only the weapons with which to go into action, one of the external means to embody the inner essence of your role. (Stanislavski, 1981, p. 141)

(2) The Superobjective

Actions in themselves are meaningless if they are not subordinated to a motive. In every play and every role, there is a hidden ruling idea, a motivating force giving direction and tension to the events. Stanislavsky calls this the superobjective.

In this innermost center, this core of the role, all the remaining objectives of the score converge, as it were, into one *superobjective*. That is the inner essence, the all-embracing goal, the objective of all objectives, the concentration of the entire score of the role, of all its major and minor units. The superobjective contains the meaning, the inner sense, of all the subordinate objectives of the play. In carrying out this one superobjective you have arrived at something even more important, superconscious, ineffable (...).

In Dostoyevski's novel *The Brothers Karamazov* the superobjective is the author's search for God and Devil in the soul of man. In

Shakespeare's tragedy of *Hamlet* such a superobjective would be the *comprehending* of the secrets of *being*. With Chekhov's *The Three Sisters* it is the *aspiration for a better life* ('to Moscow, to Moscow'). With Leo Tolstoy it was his unending search for "self-perfection," and so forth.

Only artists of genius are capable of the emotional experience of a superobjective, the complete absorption into themselves of the soul of the play, and the synthesis of themselves with the playwright. (Stanislavski, 1981, p. 77-78)

(3) The Through Action

Nevertheless a creative superobjective is still not creativeness itself. In an actor it consists of constant striving toward the superobjective and the expression of that striving in action. This striving, which expresses the essence of creativeness, is the *through action of the role or play*. If for the writer this through action is expressed by the progression of his superobjective, then for the actor the through action is the *active attainment of the superobjective*.

Thus the superobjective and the through action represent creative goal and creative action, which contain in themselves all the thousands of separate, fragmentary objectives, units, actions in a role.

(...) Often, in life and also on the stage, the through line will manifest itself unconsciously. It will become defined only after the fact, and its ultimate goal, the superobjective, will have been secretly, unconsciously, exercising a pull, drawing to itself our human aspirations.

(...) Thus the process of living your part consists of composing a score for your role, of a superobjective, and of its active attainment by means of the through line of action. (Stanislavski, 1981, p. 78-80)

Magarshack (1961, pp. 71-2) depicts the idea of the through action with a line where each single action of the actor is subordinated to the superobjective. When the through action and the superobjective are lacking, the actions have different and conflicting directions and the whole play is torn into bits and pieces.

How are the superobjective and the through action to be found? Stanislavsky gives the following advice.

While analysing Chaykovsky's characters you find in the first act, in the second, twice in the third, and in the fifth one and the same qualities, one and the same characteristic traits. You make a careful note of them. Furthermore, in

the third and final scenes you again discover one and the same qualities. As you go on with your analysis, you again find general features in the second and the third acts. You note them all down.

At the end of your analysis you find that you have jotted down 37 different qualities. A further examination shows that 3, 5, 10, 18 are really only one and the same quality, and you mark them now with one number. (...) After reducing still further the remaining (...) qualities to more fundamental ones, you get out of the original 37 qualities only four, and finally you detect one, or two, or three out of which you compose the unbroken line of your part, from which you deduce the through-action of your part in the whole play. Now you have also obtained a clear conception of the ruling idea of the play (...). (Stanislavsky, 1961, p. 148-149)

This inductive empirical generalization represents the procedures that cause Magarshack (1961, p. 3-4) to argue that Stanislavsky "knew nothing of the laws of drama" because the art and technique of the dramatist had never been studied. Certainly the procedure suggested above is a far cry from a genetic analysis of the play.

Stanislavsky's concepts are original and they continue to exert powerful influence on the theory and practice of theatre. At the same time, they are clearly of interest to the psychological theory. From the 1930's, Lev Vygotsky's disciple and collaborator A. N. Leont'ev elaborated on a general psychological theory of activity (see Leont'ev, 1978; 1981). It is reasonable to ask whether any affinity may be found between Stanislavsky's concepts and those worked out by Leont'ev. Biographically it seems evident that Stanislavsky had no contact with and was not aware of the work of the cultural-historical school where Leont'ev belonged (see Polyakova, 1982). Thus, the possible affinity must be of purely substantial and logical kind.

Leont'ev uses the Vygotskian scheme of instrumentally mediated action, consisting of the subject, the object, and the instrument (technical and/or psychological tool): "In this process man's cognition of the objects takes place, exceeding the possibilities of direct sensory reflection" (1978, p. 23). (See also Leont'ev, 1981, p. 281-282). Besides these three elements of productive human activity, Leont'ev points out other equally important constituents. He notes that the unity of individual goal-directed actions and the overall activity is achieved through "nothing other than the given individual's relation with the other members of

the group, by virtue of which he gets his share (...) from them, i.e., part of the product of their joint labor activity" (Leont'ev, 1981, p. 212).

Consequently, Leont'ev differentiates between three structural levels of activity.

Thus in the total flow of activity that forms human life, in its higher manifestations mediated by psychic reflection, analysis isolates separate (specific) *activities* in the first place according to the criterion of *motives* that elicit them. Then *actions* are isolated - processes that are subordinated to conscious *goals*, finally, *operations* that directly depend on the *conditions* of attaining concrete goals. (Leont'ev, 1978, p. 66-67; italics added)

A further central principle of Leont'ev's theory is the structural correspondence of external and internal activity. From this principle it follows that internalization is regarded as the central mechanism of cultural-historical and individual development.

When we now look for parallels between Stanislavsky and Leont'ev, at least three can be pointed out. These correspond to Stanislavsky's three most general conceptual tools.

Firstly, both Stanislavsky and Leont'ev emphasized the priority of physical, external, object-oriented and instrumentally mediated actions in learning and development. Both developed experimental procedures to enhance and study internalization. Both saw the unity and structural correspondence of external and internal activity as a fundamental point of departure.

Secondly, both Stanislavsky and Leont'ev emphasize the overall, superindividual and superconscious nature of the highest motivating and directing factors of human activity. Stanislavsky calls these factors superobjectives, Leont'ev calls them motives. These two concepts have a very close affinity with each other.

Thirdly, both Stanislavsky and Leont'ev emphasize that a singular action must be seen in a larger context, as one link in a chain. Stanislavsky calls this chain through action; Leont'ev calls it activity.

To proceed beyond mere parallels, we shall use Leont'ev's general framework to analyze

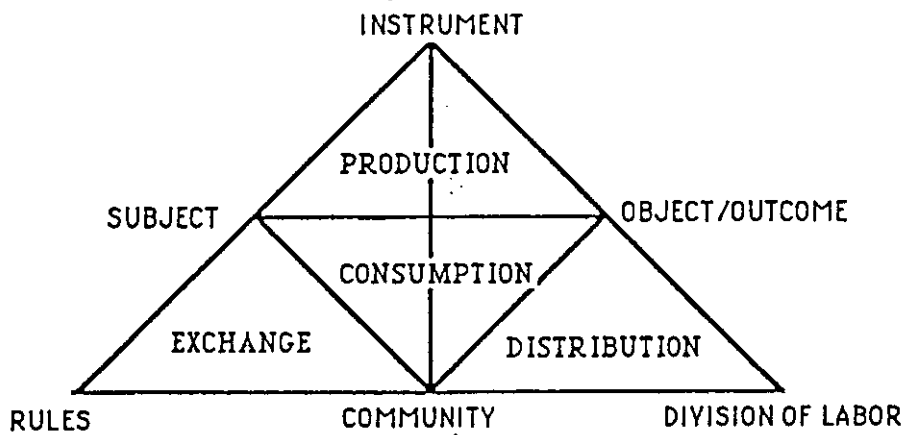


Figure 1: The general structure of human activity

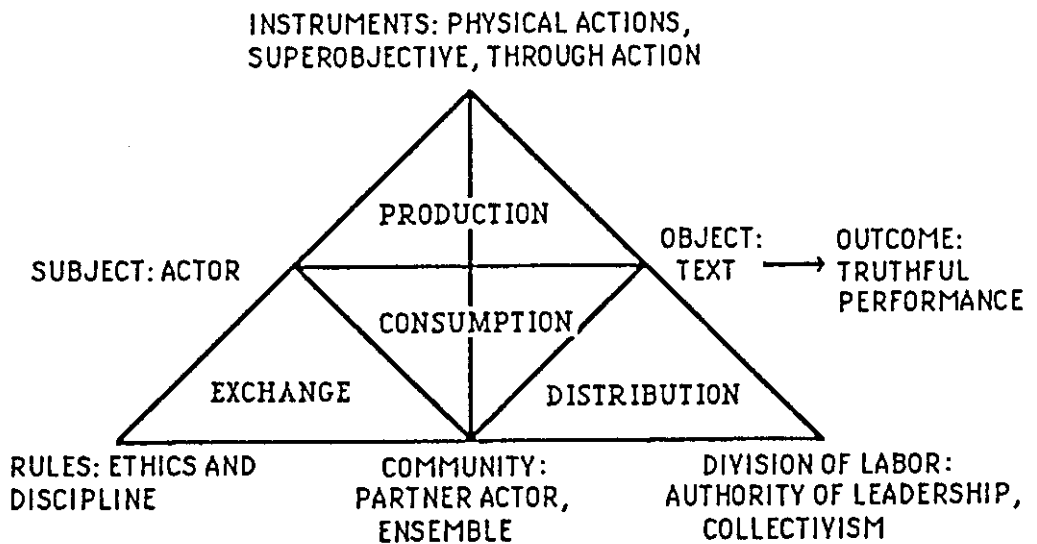


Figure 2: Model of Stanislavsky's conception of the activity of theatre

Stanislavsky's theory and practice. Leont'ev's concept of activity has been extended into the model in Figure 1 (Engeström, 1987).

In Stanislavsky's "system," the subject is the actor. The object is the text (the play, the part). The outcome is the truthful performance. The instruments are manifold, but the most general and powerful ones are the three discussed above: physical actions,

superobjective and through action. But the bottom line of the triangle is more difficult to define. Stanislavsky doesn't really analyze the theatre community, the ensemble - he rather takes it for granted. The clearest representative of the community is the partner actor with whom the subject actor communicates on the stage. The rules of the theatre community are treated as ethical norms and rules of discipline (Stanislavsky, 1968, p. 249-267). The division of labor within the theatre community is briefly discussed in terms of the

authority of the leadership and the collective nature of the work (Stanislavsky, 1968, pp. 254-259). Thus, the picture in Figure 2 emerges.

The model of theatrical production depicted in Figure 2 is not only a model of Stanislavsky's theory. It is also a model of a type of productive practice tremendously influential both in the Soviet Union and in the West. As such, it is a model of dynamic movement. To get hold of this dynamism, we shall enter the problems and contradictions experienced within the model.

The inner contradictions of this model manifest themselves symptomatically in the last theatre productions in which Stanislavsky was directly involved (Gogol's *Dead Souls* and Ostrovsky's *Talents and Devotees*).

The Stanislavsky System came into its own in these two productions; the combined efforts of producer, designer, cast and all had reached a gratifying conclusion. And yet the net result still fell short of the total integration, the absolute conviction that Stanislavsky sought. The brilliant rehearsals were succeeded by oddly flaccid - though totally credible - performances. The form remained, but the jolt of immediate experience was lost (...). The distance between rehearsals in Leontyevsky Lane and stage performances was alarming.

Moreover although the Theatre badly needed new plays written by contemporary dramatists, Stanislavsky held that the pursuit of novelty for its own sake was to be avoided at all costs. On his return from Nice in 1930, he had been greatly perturbed by the decline in Art Theatre standards when applied to living playwrights, by the interest in quantity at the expense of quality. (...) To avoid catastrophe, the Theatre must be issued with "precise governmental and Party directives on its place in the contemporary context as a *theatre devoted to the classical drama and the best, most artistic and meaningful, plays in the contemporary repertoire*". (Polyakova, 1982, p. 347)

This fragment tells about an activity system tentatively sealing itself off from the world. Stanislavsky saw the object of theatrical production in the text, not in the world and the audience as a part of the world. He warned the actors of the dangers of creating a direct contact with the audience. The world was to enter theatre only indirectly, through the text and through the experiences of the actors.

That is why an actor must be constantly filling the storehouse of his memory by studying, reading, observing, traveling, keeping in touch with current social, religious, political and other forms of life. And when he turns over these handfuls of thought to his subconscious he must not be in a hurry; he must know how to wait patiently. Otherwise, so say the yogis, he will be like the stupid child who planted a seed in the ground and then dug it up every half hour to see if it was putting down roots. (Stanislavski, 1981, p. 83)

No doubt Stanislavsky himself had an exceptional ability to sense and follow the current of history. As Polyakova (1982, p. 325) reports, he "listened attentively, in discussion groups or after a performance, to the remarks of a government official or a worker at the former Alexeyev factory who had been awarded a free pass to the Theatre for surpassing required work norms." Things became much more problematic when alternative realities entered the theatrical production process itself, as was manifested in the troublesome relations between Stanislavsky and the dramatist Bulgakov. Bulgakov's play *Moliere* was thoroughly altered by Stanislavsky. Written in 1931, it went through "endless modification and 296 rehearsals - and had a seven-night run in 1936" (Polyakova, 1982, p. 348). With classical texts, this would have been utterly unthinkable for Stanislavsky. As Joachim Fiebach (1975, p. 280) observes, "products like the literary ones are eventually presented only as something general, self-sufficient, as something that one may not or cannot touch."

The dominant inner contradiction of Stanislavsky's system may be characterized by two aspects:

Firstly, there is a contradiction between the *striving for truthfulness* and the *exclusion of the outside world* (including the audience) from the theatre's immediate circle of concern. In other words, the *intended outcome* and the *defined object* of the activity are in conflict with each other. Even though Stanislavsky reached external credibility in separate performances, he did not reach a full internal credibility in the overall activity. He seems to have realized this occasionally himself. V. O. Toporkov, a famous student of Stanislavsky's, reports the maestro's own recollection of one such incident.

We were once visiting St. Petersburg. Before performances we rehearsed a lot in the theatre where we were to perform. Sometimes the rehearsals went on till two, three o'clock in the night. Once when I was leaving the theatre to rest in the hotel, exhausted from the work, I was astonished by the scene that opened from the steps of the theatre. It was very cold. In the darkness of the night, fires were lit here and there, and the whole square was full of people. Some were warming themselves in the glow of the fire, rubbing their hands, feet and ears, some had formed groups and were arguing heatedly about something. Smoke was rising from the fires and thousands of voices were crossing the air. I didn't understand anything, so I asked someone standing near: "What is happening here?" - "They are waiting to get tickets to your performances." My God, I thought, what a responsibility we are taking when we want to satisfy the spiritual needs of these people who are freezing here all through the night, how great ideas and thoughts we must transmit to them!

(...) That night excitement and feeling of responsibility kept me awake for a long time. I realized that beyond the superobjective of the play there must be a super-superobjective. I cannot yet define it but that night I felt that those people who stood on the square must get still much more than what we had prepared for them. (Toporkov, 1984, p. 69)

This super-superobjective was never worked out by Stanislavsky. Obviously it would have required an expansive solution to the contradiction described above, a breaking out from the hermetic system in the process of theatrical production itself.

The second aspect of the contradiction is the conflict between Stanislavsky's insistence on the *creativity* of acting and the strict *adherence to the already given text* of the playwright. This time it is a tension between the *ideal subject* (actor as creator) and the *defined object* (text as given).

As we noted above, Stanislavsky himself broke this adherence when he did not consider a contemporary text "classical" enough. But this was not an emancipatory process for Stanislavsky's actors, rather on the contrary. On the other hand, Stanislavsky's practical progress with the physical actions approach led to experimentation that opened vistas toward an expansive solution. This is clearly demonstrated in his paper *From Physical Actions to Living Image*, written in 1934 and included as a chapter in *Creating a Role*. The role figure Tortsov represents Stanislavsky.

"Here is my approach to a new role," said Tortsov. "Without any reading, without any conferences on the play, the actors are asked to come to a rehearsal of it."

"How is it possible?" was the bewildered reaction of the students.

"More than that. One can act a play not yet written."

We were at a loss even for words to express our reaction to that idea.

"You do not believe me? Let us put it to the test. I have a play in mind; I shall tell you the plot by episodes and you will act it out. I shall watch what you say and do in your improvisation, and whatever is most successful I shall jot down. So that by our joint efforts we shall write and immediately act out a play not yet in existence. We shall share the profits equally."

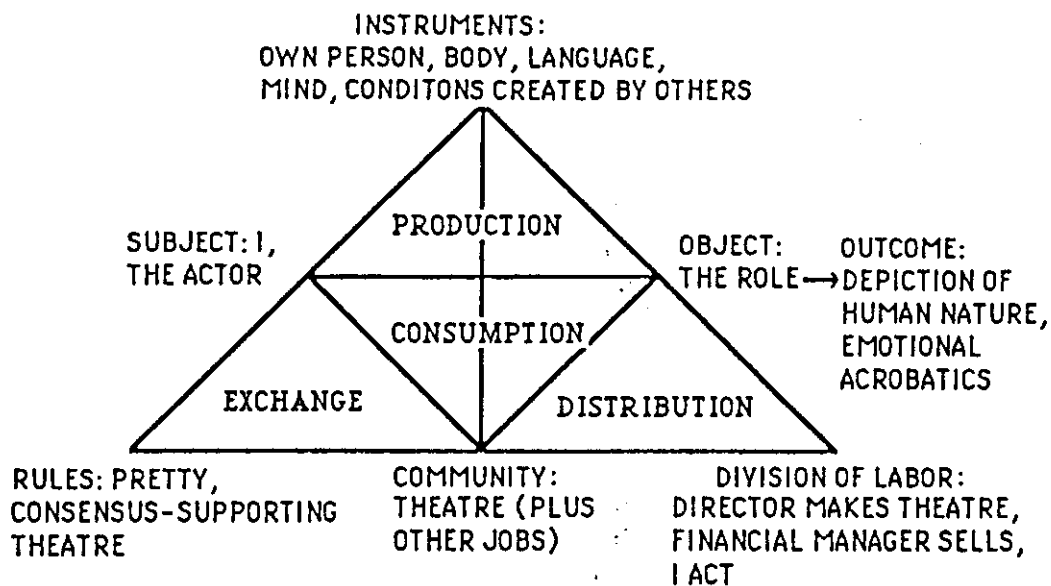
(Stanislavsky, 1981, p. 213)

Unfortunately such a play never took shape in reality during Stanislavsky's career. It was only an instructional thought experiment. But in principle this excerpt shows the potential of physical actions to override the given text and move into territories unknown.

Analyzing Today's Theatre Practice: How Professionals Reconstruct Their Own Work.

In August 1985, we held a workshop with 24 Finnish theatre professionals, representing actors, directors, dramatists and theatre educators. The participants first received a conceptual orientation to Leont'ev's theory of activity. They were instructed in the application of the model of activity presented above in Figure 1. In groups they worked out an analysis of the development of their own work in terms of the model. They were asked (a) to describe the work of their professional group as it "used to be," (b) to describe their work as it presently is, (c) to identify the main contradictions of their present work, and (d) to sketch the structure of their work in the future, after the solution of the present contradictions. The groups worked intensively on the task for half a day.

It was very difficult for the groups to produce any models to the last part (d) of the task. The two future descriptions produced (by actors and dramatists) did not apply the model of Figure 1 - they were metaphorical images rather than analytic conceptual models. In the following, we present the solutions of the four groups to parts (b) and (c) of the task in a somewhat simplified manner.



CONTRADICTIONS: -sparkle is lacking, everything is done on the directors terms
 -directors don't know enough of the actor's work process
 -actors don't work independently enough
 -overproduction of performances: too much is squeezed out of the actors

Figure 3: The actor group's analysis of their work at present.

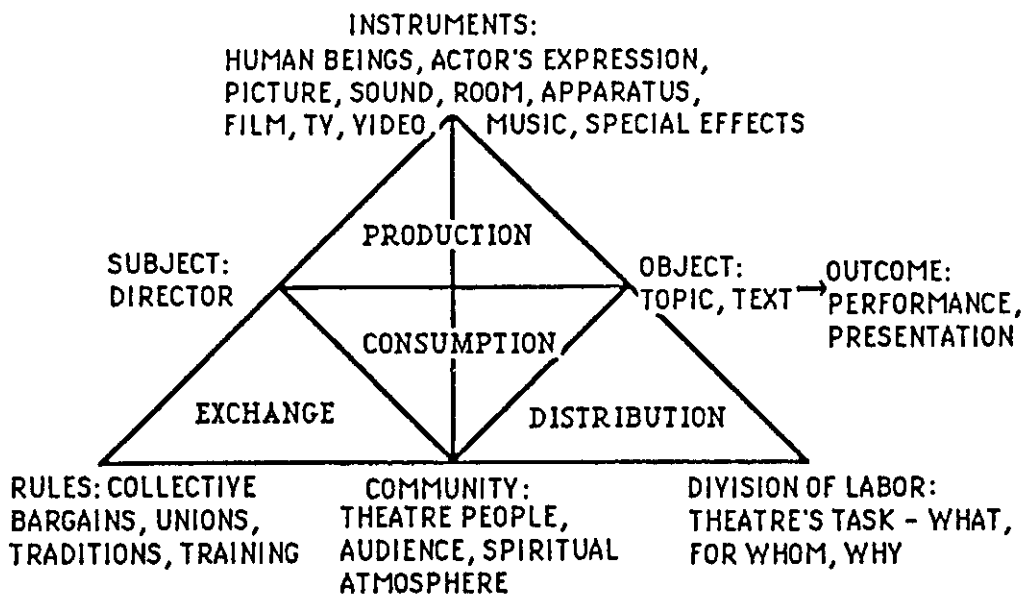
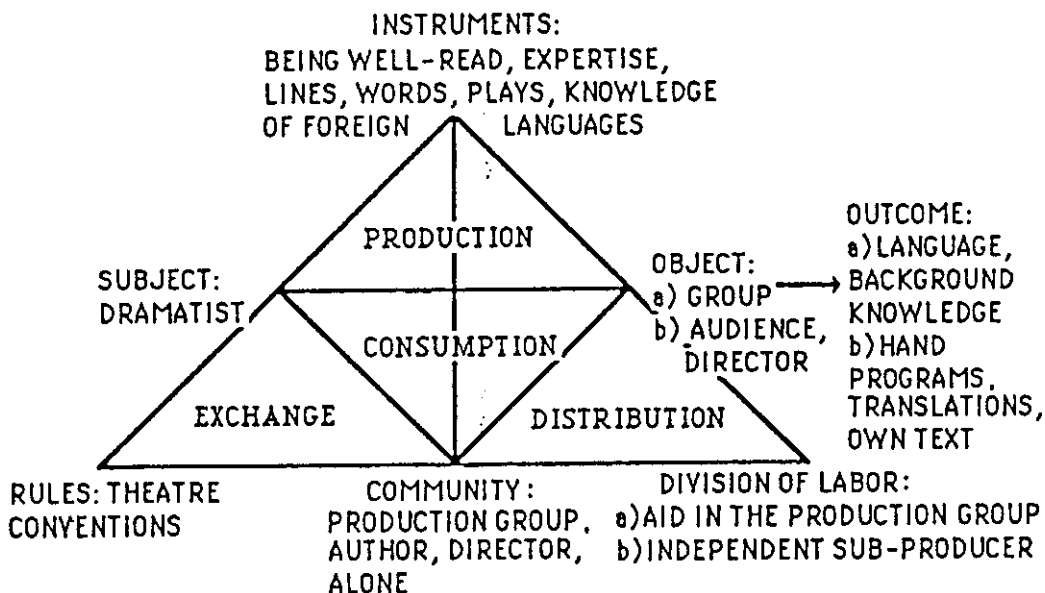
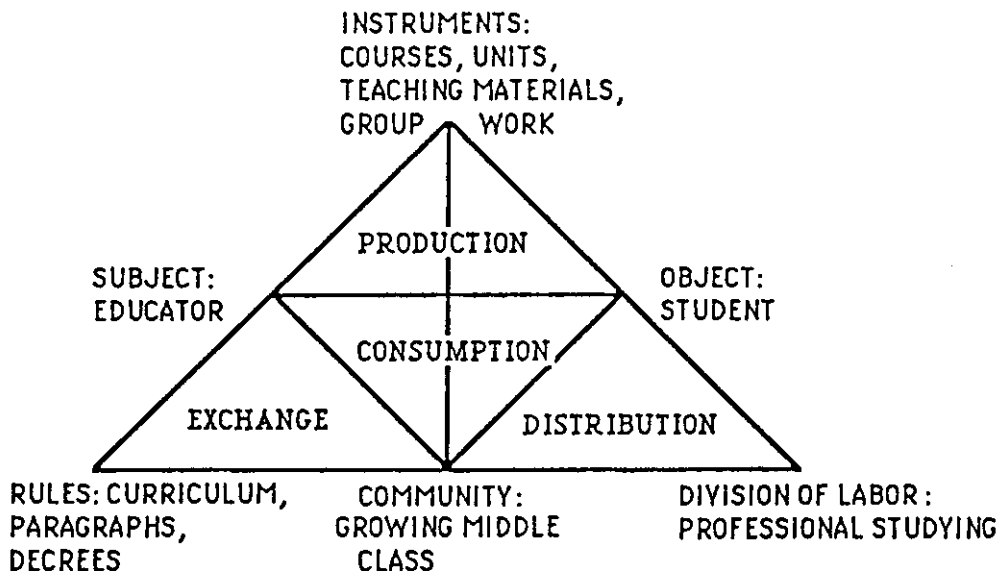


Figure 4: The director group's analysis of their work at present.



CONTRADICTIONS: -tension between implementation and creation
-how to belong to the community

Figure 5: The dramatist group's analysis of their work at present.



CONTRADICTIONS: -is the educator an artist anymore?
-too great demands from the students, difficulties in motivating them
-bureaucracy

Figure 6: The educator group's analysis of their work at present.

The actors' model is very clear and ironic. They see themselves as emotional acrobats at the mercy of all-powerful directors. The demand is for more independence, for less quantitative stress in the work. It is symptomatic that the future image of the group was that of actor as a butterfly - beautiful, free and untouched. It is a rather egocentric analysis, echoing a longing for an artisan-like creative autonomy of the individual actor. Typically the despotic director was seen as the source of much evil.

The directors' model is not quite so clear. The logic of the model is broken in the elements of community and division of labor. Instead of the ensemble or the theatre institution, the directors saw their community as including the audience and the general spiritual atmosphere. And they considered the division of labor in terms of the role of the theatre in the society at large, not within the theatre. Not surprisingly the directors complained that too many tasks are falling into the hands of the director. At the same time, they complained that the "institutions" (e.g., the city financing the theatre) have taken over planning tasks and economic responsibilities. Thus, the institutions and rules are conquering the role of subjects and artists are being pushed into the position of instruments. Again we witness the quest for autonomy.

The dramatists had a clear division of two alternatives in their model. Either the dramatist works as a subordinate member of the production group, losing his autonomy but gaining his sense of belonging. Or the dramatist becomes an independent contractor, working much in the manner of free novelists and playwrights. The latter alternative was preferred by the group.

Finally the theatre educators' group saw themselves as losing the position of artists and becoming instructional bureaucrats. But the threat does not come only from the rules. Also the students, often already working professionally while still studying, make unrealistic demands and are difficult to motivate.

A glance at the four models reveals two common features. First, the groups did not really identify contradictions (as clashes between two opposing yet mutually dependent forces). Rather they listed problems and threats felt among the professional group in question, stemming from *conflicts between the autonomy of the subject-group and the restrictive influence of other constituents of the activity structure* (e.g., despotic directors, bureaucratic rules, demanding students).

Secondly, the unifying aspiration of all four groups is *autonomy within the theatre*. It seems as if each group believed that problems would be solved if only they could more freely realize their particular talents. None of the groups focused on the relationship between the theatre and the life outside of it, or between the audience and other elements of theatre. Indeed, none of the groups (a partial exception being the dramatists) placed the audience and/or people's societal lifeworld in the "object" corner of the model. For actors and directors, the object was the text or the role, for dramatists the object was the people they try to influence to get their ideas through, and for educators the object was students. This understanding of the object might be characterized as degenerate Stanislavskyism. It is degenerate because the originality and conviction typical to Stanislavsky's argumentation are lacking, being replaced by self-irony and worry.

In the discussion following the presentation of the four models, this hermetic view of the object of theatre work was realized by the participants in a self-critical manner. A quest for further, expansive working out of the object was expressed. Progress along such lines may consist of three steps in the cognition of the contradictions of theatrical creation, from external manifestations to the internal core:

Step 1: Contradictions are formulated as problems and threats to autonomy felt by each professional group in relation to other, restrictive constituents of its activity structure. This step was taken by the participants of the workshop.

Step 2: Contradictions are formulated as stemming from one major source common to all professional groups, namely the contradiction between the lifeworld of the potential audience and the relatively hermetic, self-sufficient world of the theatre. This step was anticipated as necessary in the workshop discussion.

Step 3: Contradictions are traced back to the primary inner contradiction characteristic of all objects and activities in capitalist society, namely the dualism of the use value and the exchange value of a commodity. A theatre performance as a product of theatre labor is no exception.

The picture that an artist puts all his skill into, he has to paint in order to convert it into money, into a thing that has nothing in common with painting. Nevertheless the picture retains its real sense for the rich industrialist who buys it. For him it may, perhaps, acquire the sense of a thing in which he wants to invest some of his money, or a thing testifying to the prosperity of his firm.

(...) The penetration of these relations into consciousness also finds psychological reflection in a 'disintegration' of its general structure characterized by the rise of an estrangement between the senses and meanings in which the world around man and his own life are refracted for him. (Leontyev, 1981, p. 254-255)

Implications for Cognition and Learning: The Model Systems of Theatre

Gavin Bolton has recently analyzed the historical development of American and English ideas of drama in education. According to him, the dominant practice of drama education in schools concentrates on the teaching of performance skills and formal techniques. Children are trained to "simulate and 'parade' emotions in a vacuum" (Bolton, 1985, p. 151). Bolton argues that behind this misguided practice there is a history of theoretical distortions of the nature of drama and theatre, produced by the leading authorities of education through drama.

A central feature of these distortions is the idea of drama as a liberator of individual potentials of creative self-expression.

I suggest that to see drama in this way is to misunderstand drama. Of all the arts, drama is a collective experiencing, celebrating, or commenting, not on how we are different from each other, but on what we share, on what ways we are alike. To encourage individual children to search for a drama within themselves is to distort the meaning of dramatic form. Drama is not self-expression; it is a form of group symbolism seeking universal, not individual truths. (Bolton, 1985, p. 154)

Following Dorothy Heathcote, Bolton (1985, p. 154) further argues that artists "must look outward before they can look inward." He sees the meaning of

drama in the interplay between two worlds - the real world and the imagined world. But then comes a disappointing conclusion: "above all drama is a *mental state*" (Bolton, 1985, p. 155). Dramatic production is reduced to "modification, adjustment, reshaping, and realignment of concepts already held" (Bolton, 1985, p. 156).

Here we have a curious anomaly. First we get a refreshing opening-up of drama to the world, badly needed in the atmosphere of self-sufficient theatre and technical drama education. Then we get a reduction of drama back to the mentalism from which Stanislavsky showed an expansive way out.

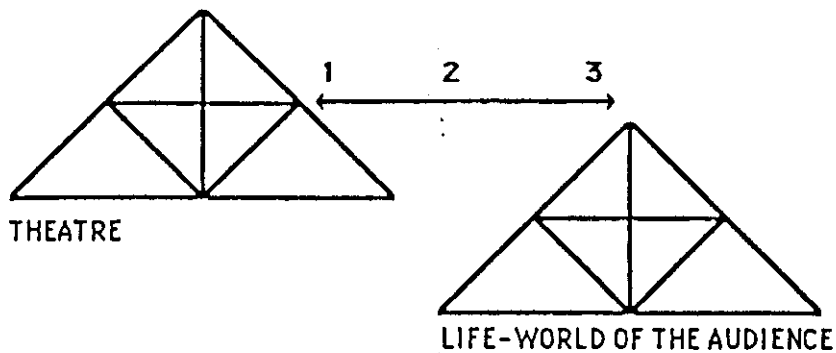
The problem of mentalism is essential because it entails a certain view of creation or production. For mentalism, creation and production are something subjective, taking place within the head of the individual but not bringing about new material, societal artifacts, instruments and structures of activity. Thus a theatre production, for example, is viewed as a symbolic form that helps the participants rearrange their conceptions and feelings - albeit collectively (for Bolton). It is not viewed as a symbolic but no less material product (or a dynamic model) which may enter the life activities of people and become a novel instrument for them in their interaction with real, sensuous objects.

Thus we get a series of three dimensions:
Hermetic Self-Sufficiency vs. Interplay of the Real and Imagined Worlds

Mentalism, Cognitivism vs. Object-Oriented Communicative Activity

Subjective Rearrangement vs. Objective Creation and Production

These three dimensions are relatively independent of each other, as we see from the comparison between Stanislavsky and Bolton. The perspective of opening-up to the world, combined with the perspectives of object oriented activity and objective creation, leads to a conception of theatre as *collective worldmaking*, the term "worldmaking" being borrowed from Goodman (1978). The object of theatre would in this perspective be the "real world" or the life activity of people (potential audience). The outcome would be an imagined world, or a dynamic model - imagined but very real and material, too. In entering the life activity of the audience, this outcome would be turned into an



1. LIFE-WORLD CONSTRUCTED AS OBJECT OF THEATRE
2. LIFE-WORLD WORKED INTO AN IMAGINED WORLD (OUTCOME)
3. IMAGINED WORLD TURNED INTO AN INSTRUMENT OF LIFE-ACTIVITY

Figure 7: An expansive model of theatre production.

instrument of that object-activity. This structure may be depicted with a diagram (Figure 7).

The concept of imagined worlds is nicely discussed by Cecily O'Neill (1985). She points out the importance of "what if...?" questions - something essentially similar to Stanislavsky's "magic if." The dramatic construction of imagined worlds is essentially a process that takes us "beyond ourselves," to a level of consciousness and generalization beyond the mere individual and accidental. This process may first be restricted by stereotypic responses, but these fade away as the work grows in complexity: "rules of behavior are partly anticipated and partly forged in the process" (O'Neill, 1985, p. 159). The characteristics of imagined worlds in theatre include non-linear systemic interaction, discontinuity and incompleteness (Elam, 1980, p. 99).

In our view, creativity is based on imagination. Imagination in turn is not just an internal disposition. We agree with Wartofsky's (1979, p. 209) point that imagination as internal representation is "derivative from the actual making of imaginative artifacts." We may consider theatre as an ideal model system for learning to create collectively imagined worlds. What makes it ideal is that it is compact yet socially and semiotically complex, transparent yet never fully predictable. It is at the same time handy to manage and mobile enough to create trouble.

Cole (1986, p. 31) characterizes the idea of model systems as "a set of constraints that allows for voluntary participation but also for rigorous analysis" and makes possible the systematic observation of "selected disorganization in complicated, voluntary behavior." Essential here is the quality of the constraints. In a productive model system, the constraints - or instruments - must be given *and* created at the same time. For example, the constraints proposed and practiced by Stanislavsky - the superobjective and the through action - had to be created for each play and each part (even for each performance) by the ensemble and every individual actor. They could not be taken in a finished form from manuals: they were not techniques but principles. The same is true of Brecht's constraints, "distancing" and the *gestus*.

Dorothy Heathcote proposes another, instructionally interesting type of constraint. She calls it the "mantle of the expert."

When the mantle of the expert is used in drama, the teacher assumes a fictional role which places the student in the position of being 'the one who knows' or the expert in a particular branch of human knowledge. (Heathcote & Herbert, 1985, p.173.)

A teacher cannot presume to give direct information to experts but instead must set up ways in which the experts will discover what they know while at the same time protecting them from the awareness that they do not as yet have this expertise. (...) The teacher enables the

group to gain the expertise through the application of the dramatic imagination to whatever social reality is to be symbolically represented. (Heathcote & Herbert, 1985, p.174.)

Although promising in many respects, this type of constraint no more than those developed by Stanislavsky attacks the problem of *turning the imagined world created into a living instrument* for those whose life activity was the object in the first place (naturally this potential audience may also consist of the students themselves). Nor does the mantle of the expert provide any instruments for dealing with the inner contradiction (use value vs. exchange value) of the artifacts and life structures of the potential audience. If our analysis of the contradictions of theatre activity are correct, the constraints (instruments) with which the model system is constructed must answer to these very demands in order to be successful in the long run.

In other words, we suggest that if drama education is to be developmentally valuable, it has to address the same methodological questions that are faced in the activity of theatre. It is questionable to teach children a kind of 'theatre' that does not and cannot exist - not even as a future project - in the world outside school. In real theatre, nobody protects the directors and actors from realizing their own ignorance and lacking expertise of the outside world - nobody but themselves.

The models of activity developed above are tools with which theatre people may analyze their own activity structure and concentrate their efforts on the solution of the essential contradictions. They may also function as tools for those wishing to develop education through drama into a productive model system for learning to create collectively imagined worlds. The decisive developmental question is that of the adequate constraints or instruments.

Note

¹In Finland, the typical form is a municipal theatre, financed largely through taxes and employing its staff on the basis of lengthy contracts. Actors, directors and other main personnel groups are educated at the Theatre Academy of Finland and at the University of Tampere, and there is little unemployment in theatre professions. We are aware that the situation is very different in the United States, for example.

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The 1st International Congress on the Theory of Activity took place in West Berlin from October 3-5, 1988. During its last plenary session it was decided to found an international society on the Theory of Activity, to establish an international and multidisciplinary journal for the Theory of Activity and to hold the 2nd International Congress in Finland in May, 1990. Since then the foundation of the Society has been accomplished. Its name is: International Standing Conference for the Research on Activity Theory. Its officers are:

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