Scaling Change Labs: A Response to "From Mediated Actions To Heterogenous Coalitions: Four Generations Of Activity-theoretical Studies Of Work And Learning"

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In their discussion of the generations of activity theory, Engeström and Sannino briefly mention my recent *MCA* piece on the codesign focus in the activity theoretical work of the late 1980s and early 1990s (Spinuzzi 2019). I'm endlessly fascinated by this period, partly because I began exploring the AT literature in the mid-1990s and found a vision that was quite different from those in my native country, the United States. My entry points were Engeström's (1990) *Learning, Working, and Imagining* and Bødker's (1991) *Through the Interface*, and I still remember comparing them and trying to figure out how Engeström's and Bødker's triangle diagrams related. (They didn't. I had so much to learn.)

What came out clearly in both texts was their concern with ensuring that people had control over the conditions of their own labor—and more than their concern, their interventionist mechanisms for doing so.

Controlling the conditions of one's own labor: Participatory design and Change Labs

To furnish such interventionist mechanisms, Bødker and her collaborators in the UTOPIA project developed a number of integrated techniques (see Spinuzzi 2005b for an overview) that not only explored workers' tacit knowledge, but provided a common language game, allowing workers and computer scientists to have deliberative dialogues about their work. Critically, the workers who participated were not *functional* representatives, i.e., "average" users—rather, they were *political* representatives chosen by the union, charged with looking out for the interests of those they represented. As I discuss elsewhere (Spinuzzi 2005a), the techniques that they developed in this environment were picked up and deployed in the U.S., but because the U.S. had much weaker unions, these techniques were adopted for functional representatives in approaches such as PICTIVE and Contextual Design (and we can see aspects in Design Thinking as well.) The U.S. had potential stakeholders just as Denmark did—engaged workers who would have liked to have more control over their working conditions—but no coalition that could represent them as a larger group.

Like Bødker and her collaborators, Engeström and his collaborators at CRADLE developed an interventionist approach that allowed workers and researchers to deliberate on and codesign work. Based on the theory of expansive learning outlined in *Learning by Expanding* (1987/2014), this approach emerged in the mid-1990s and became known as Change Laboratory (Engeström 1996, 2011; Sannino 2011). Change Labs have several similarities to participatory design projects: A Change Lab "serves as a microcosm in which potential new ways of working can be experienced and experimented with" (Engeström 2011, p.612), "is typically conducted in an activity system that is facing a major transformation" (p.612), includes various people who already participate in the ongoing activity, and involves constructing and using representations of the activity (for participatory design, these include organizational games; for Change Labs, these include triangular models of activity systems; p.612). Both

encourage deliberation, ultimately attempting to develop a consensus concept or vision of a future state—participatory design's is grounded in Jungk's Future Workshops (Jungk & Mullet 1988; cf. Bødker et al. 1987; Ehn 1989), while Change Labs' is grounded in the Vygotskian principle of double stimulation (Engeström 1996; Sannino 2011).

Critically, since both approaches encourage deliberation, they both open up a full range of questions for participants to deliberate. In both approaches, mediators allow us to intervene at various conceptual levels, from lower-level epistemic questions such as "what," "who," "when," and "how" to higher-level questions such as "why" and "where to?" (Engeström 2007; Engeström, Pasanen, Toivianen, & Haavisto 2006; cf. Bødker & Iverson 2002; cf. the "why," "what," and "how" layers in Bødker 1997). The Change Laboratories method naturally generates such questions by encouraging six kinds of participant agency:

1. *Criticizing* the current activity and organization.
2. *Questioning or resisting* the interventionist or the management. Resistance towards the intervention process or the management may take the form of criticism, questioning, opposition and rejection.
3. *Explicating* new possibilities or potential in the activity. This refers to reflecting on previous positive experiences and seeing them as a potential left unacknowledged or characterizing the problematic object as a source of new possibilities.
4. *Envisioning* new patterns or models of the activity. Envisioning can occur in the form of preliminary suggestions or presentation of com- prehensive models for the future.
5. *Committing* to concrete actions aimed at changing the activity and expressing this through commissive speech acts.
6. *Taking* consequential *actions* to change the activity. Participants of the interventions may actually change the situation through a sequence of actions. This may occur in, between and after the laboratory sessions. (Engeström, Kaatrakoski et al. 2012, p.404)

When people in Change Laboratories made their way to these higher-level questions, they began to question the concepts given "from above" by their institution, instead substituting and then synthesizing concepts that emerged "from below" during the Change Lab (Engeström, Pasanen, Toivianen, & Haavisto 2006). Thus the Change Lab became a mechanism for these individuals to critique and reformulate concepts rather than taking these concepts as a given. They were empowered not just to *implement* directives "from above" but to *remake* these directives. As Haapasaari et al. (2016) put it, "Transformative agency goes beyond the individual as it seeks possibilities for collective change efforts" (p.233), and can involve questioning a problematic object that has been given by management (p.236). That is, Change Labs and participatory design offered workers not just help in working more effectively (the "how"), but a means to *participate in reformulating the object of their work* (the "why" and "where to").

Broadening the scope: Widening units of analysis

Beyond developing the Change Labs methodology, activity theorists also undertook theoretical development in the 1990s and 2000s. As Engeström and Sannino tell us, the four generations are

anchored to units of analysis, and generations 2-4 are more specifically anchored to objects of activity (ms p.2). The third generation had to expand from one activity system to two or more because "activity systems are increasingly interconnected and interdependent" (ms p.2). And the fourth generation had to expand further due to "increasingly complex 'runaway objects' with broad societal ramifications" (ms p.2). In each case, activity theory's generations have developed to respond to new phenomena (increasingly interconnected activities; increasingly complex runaway objects).

Beyond objects, each generation involves a larger scale of human interaction. In Vygotsky's (first-generation) and Leontiev's (second-generation) work, empirical work was done with individuals or dyads (although these were always understood as fundamentally social). Vygotsky's mediation triangles and Leontiev's activity systems both had individual subjects. When activity theory was taken up in the West, the activity system's subject became a collective subject (Kaptelinin & Nardi 2006) and empirical cases began including more than two people, but within a spatially and temporally constrained interaction such as doctor visits and court cases (e.g., Engeström 1992). By 1995, Engeström and collaborators were investigating activities with broader scope as well as different types of work activities (e.g., Engeström, Engeström, & Karkkainen 1995). As the investigatory scope expanded temporally and spatially (Engeström, Puonti, & Seppänen 2003)—that is, as Engeström and collaborators examined instances that lasted longer than hours, spanning different settings and multiple data sources—activity theorists investigated more people in more activity systems connected in broader networks of activity, inevitably leading to more complexity. That complexity involved more stakeholders, less stability, and less agreement on what an object was (e.g., "partially shared and often contested objects": Engeström & Sannino 2010, p.1).

Put another way, first-generation activity theory was basic psychology: it established fundamentals for understanding human behavior. Second-generation activity theory was applied psychology: it applied insights to practical problems of human behavior. Third-generation activity theory transformed into something more like an organizational sociology, modeling social dynamics in and across organizations. In each generation, the objects of activity theory have expanded theoretically and methodologically (Spinuzzi 2011; cf. Engeström et al. 2003). The scope keeps widening, and we can see that progression in Engeström and Sannino's current paper: Figure 1 (first generation) shows an individual subject, Figure 2 (second generation) shows a collective subject made up of a few people, and Figure 5 (third generation) shows three interacting social groups—one of which is an entire children's hospital.

So how might we characterize the fourth generation as described in Engeström and Sannino's manuscript? As they tell us, the fourth generation "entails the involvement of a wide variety of actors at multiple levels – local, regional, national and possibly global" (ms p.14). Their extended example in this paper includes actors such as NGOs, housing units, municipal services, state-level actors, and neighborhood associations—that is, institutional actors—as well as staff and clients at a housing unit. All of these actors are involved in intertwined learning cycles (Figure 6). In the longitudinal Change Laboratory interventions, representatives of a given institution co-constructed analyses with the researchers, and in some cases representatives of a given institution interacted with another institution's Change Laboratory. That is, the analytical scope has broadened even further, to the level of *public policy decisions* such as a national policy on eradicating homelessness.

Scaling interventions to address public policy

How do we scale up to a new level of analytical scope, requiring a new unit of analysis, while still retaining the deliberative orientation that has been a hallmark of interventionist research? How do we ensure that our participants continue to be fully engaged stakeholders who can answer a full range of epistemic questions, from the lower-level "what" and "how" all the way up to the "why" and "where to?"

Before we examine how Engeström and Sannino answer this question, let's review how they characterize the problem space to which they apply their new unit of analysis:

> To us, the main challenge that requires a fourth generation activity theory is the radical and fateful transformation in the *objects* of human activity. In the current phase of capitalist globalization, such interconnected objects as poverty, climate change and pandemics cannot anymore be treated as isolated issues to be brought under control by technical means; they influence and pervade the objects on innumerable activities and call for radical revisioning of the ways our societies and lives are organized. (ms p.13)

And

> fourth generation activity theory should offer a unit of analysis able to grasp a qualitatively new type of activity formation and concerted efforts that can realistically counteract stigma and suffering associated with conditions of deep disadvantage. Such a new step entails the involvement of a wide variety of actors at multiple levels – local, regional, national and possibly global. Such heterogeneous activities are brought together by objects that are directly related to the future of the planet and the humankind living on it, that is, to urgent socio-economic, ecological and humanitarian crises. (ms p.14)

But is this type of activity formation *new*, or is it just *newly visible* because activity theorists have decided to broaden the unit of analysis? Is fourth-generation activity theory responding to historically new phenomena, or is it discovering old, known phenomena as it moves into the problem space of public policy? After all, public policy has long been addressed by heterogeneous public and private coalitions with differing interests, and it has long faced local compliance challenges of the sort described in the homelessness case.

If the problem is *new*, what makes it new? Homelessness is not a new phenomenon (Vygotsky served and studied children who had been left homeless by the Russian Civil War, for instance; Sannino 2011, p.580). Nor is this case newly connected to other factors: homelessness has always had many potential contributing factors, and public policy specialists have long analyzed how these factors interrelate.

So perhaps the problem is just *newly visible*. But if so, how does activity theory provide a better framework for analyzing and addressing public policy problems than those that have been developed by public policy experts? The public policy literature does already offer theoretical and methodological frameworks for addressing how policies are researched, formulated, validated, piloted, and subjected to review by the public and by affected agencies and entities. Given the breadth of individuals who must be characterized in order to provide evidence for public policy decisions, this research tends to rely on

quantitative data, sometimes paired with qualitative data. For instance, in a landmark study of the homeless in my own city of Austin, Snow & Anderson (1993) paired qualitative research (participant-observation) with quantitative research (tracking a sample of homeless through a network of core institutions)—providing qualitative thickness while still allowing them to characterize homelessness at the level of a city. In another study, researchers reviewed 30 years' worth of archival data to investigate the relationship between homelessness and age cohorts in New York City—a relationship that uncovered contributing factors to homelessness over time (Culhane et al. 2013). However, Engeström & Sannino do not appear to substantively engage public policy literature in their manuscript, nor in other publications regarding this project (Sannino 2018, 2020; Sannino & Engeström 2018). We don't have analogous studies with which to contrast the fourth-generation approach in this problem space, and thus this existing literature can't help the authors to adapt the Change Labs approach to better address the challenges of work at this scale.

Yet, strikingly, the manuscript does not describe Change Labs as a way of deliberating or concretely improving public policy. Instead, the authors accept the Housing First principle as a given, then work to find ways to *implement* that principle. In other words, unlike in previous Change Labs work, the participants in this study are led to address lower-level epistemic questions such as "what," "who," "when," and "how?" They do not appear to be addressing higher-level questions such as "why" and especially not "where to?" They are not encouraged to question the concept (the Housing First principle) that has been given "from above" and certainly not to rethink, reformulate, or remake the policy. To "enact the shared utopia" (ms p.14), individuals must accept—not criticize, question, or resist—a common vision of the utopia. They must comply with that single vision, and make choices that help to enact it, bringing them "toward the next steps of the strategy" that has been laid out at the national level (ms p.19).

Thus the central story offered at the housing unit level is one of compliance. Without consulting staff, a new manager decides to demolish the protective wall that had been erected between residents and staffers. Rather than criticizing, questioning, or resisting this decision, staffers are envisioned as accepting it and complying by choosing to sit with a resident rather than staying in safety. It's not clear to what extent staffers actually did this—the language becomes speculative here—but we're told that the decision to remove the wall "led to great turmoil among the staff" because "Some of the workers were afraid of the residents, and the idea of being in an open space with them without a protective wall in between was very difficult for them to accept" (p.17). Indeed, the workers' fears have at least some validity: Elsewhere, Sannino quotes a staffer who describes aggressive behavior from residents, behavior that sometimes requires him to call the police (2018, p.390)! Still, the authors hope to coax the staffers out with a bowl of oatmeal: Double stimulation, which in previous work has been characterized as a powerful principle for collective intervention underpinning Change Labs (Sannino & Engeström 2017), is used here as a management tool to convince staff to take on more personal risk in their jobs.

What of the other stakeholders? The residents did not participate in the Change Labs at all, but we are told that "The residents largely welcomed the change as a perspective toward regaining their self-esteem and self-determination" (ms p.18). The neighborhood association did not participate either, although we are assured that "the learning taking place within the housing unit directs and support[s] learning in the neighborhoods" (ms p.15). Of the other represented stakeholders, we are told that "Two related Change

Laboratories followed in 2019, one with city level actors in the city of Tampere and the other one with state-level actors" (ms p.18), but not who these actors were. The Change Labs were "intertwined," but in ways that sound minimal: one practitioner from one Change Lab presented at a second Change Lab; two participants from previous Change Labs participated in a subsequent one; some video clips from the first two Change Labs were used in the third. How deeply did the parties interact? To what extent did the carried-over participants represent the work of their previous Change Labs? How many video clips were used, and how did they impact the deliberations of the third Change Lab? The answers are not clear; the results are being analyzed.

In sum, the Change Laboratory approach has been *applied* to this fourth-generation problem, but it does not yet seem *scaled* to the new problem space.

How should Change Laboratory scale up to meet the challenges of public policy?

Change Laboratory is an admirable interventionist approach with an impressive track record at the level of workgroups and organizations. There, it has encouraged participants to engage in a full range of epistemic questions through deliberation, yielding new concepts and new work solutions. Change Labs is grounded in, and carries on the work of, ensuring that people have a say in the conditions of their own labor.

But workgroups and organizations are not the same as the new unit of analysis the authors propose: "the multiple coalescing cycles of expansive learning involved within and across the activities involved, their relatively independent dynamics and their interdependency" (ms p.14). To address that unit of analysis, the Change Laboratory approach has to be adapted. Here are three possible adaptations:

Comparison, contrast, and complementarity with applicable theoretical and methodological frameworks from public policy. Public policy has already developed its own theoretical and methodological frameworks (including learning theories: Grin & Loeber 2007). To advance, Change Labs needs to be put into dialogue with these other frameworks—and to be taken up in public policy, Change Labs would benefit by showing how the data produced in these interventions can complement the other data that are typically collected in public policy approaches. For instance, how might the results of Change Labs complement data collection such as surveys and focus groups, or analysis approaches such as the Issue Analysis/Dinner Party approach, Scenario Logic, or Scenario Gaming (Brutscher et al. 2010)? How can Change Labs become part of this larger set of public policy strategies, creating complementary insights? Conversely, what part(s) of the existing toolkit should it replace?

Complementarity, I think, is critical for scaling Change Labs to the public policy space: Although the scope of the problem has gotten larger, Change Labs is still a largely small-*n*, qualitative, and time-consuming approach. The researchers simply can't run Change Labs with all possible entities (all housing units, all neighborhood associations)—that is, the methodology cannot easily yield the range of data needed to steer public policy decisions (cf. Sadovnik 2007). But Engeström & Sannino might take a page from public policy researchers by triangulating their qualitative Change Labs data with more scalable sources of quantitative data (e.g., institutional tracking (Snow & Anderson 1993), archival records (Culhane et al. 2013), cluster analyses of transitional spaces (Marr et al. 2009), or surveys of

stakeholders). Doing so would involve carefully examining the other sources of data available and carefully reformulating Change Labs to use those data sources as well as to produce compatible data.

Scaling to restore top-level epistemic questions. As mentioned above, the Change Labs described in this manuscript do not appear to be addressing higher-level questions such as "why" or "where to?" That's understandable: When we scale to the level of public policy, we can't put everyone's hands on the steering wheel. Yet the Change Labs approach has developed to help people address a full range of epistemic questions, and with some development, perhaps that potential can be more fully tapped even in this new problem domain. Without that component, as I've suggested above, Change Labs becomes a way to implement commands and concepts "from above," not a mechanism for synthesizing such concepts with ones "from below." I don't know how that component can be implemented in this environment, but perhaps examining other public policy approaches could yield insights in this direction. That is, top-level epistemic insights could be generated in each Change Lab and circulated to the others so the entire heterogeneous coalition can deliberate them.

Interconnecting to yield greater cross-stakeholder dialogue and learning. Finally, the Change Labs described here seem relatively self-contained: independent rather than interdependent. In particular, the housing unit Change Lab (the one about which we are told the most) seems much like a standard third-generation Change Lab, focused on one workplace and developing workplace-level insights (though constrained to mid- and low-tier epistemic questions). The authors do note some interconnections among the three Change Labs, but these are quite restricted in relation to the deliberative nature of Change Labs. How might Change Labs be redesigned to more rigorously interconnect—in terms of regular exchanges of data and in terms of substantial deliberative contact among representatives of previous Change Labs? Could a participant from one Change Lab be designated as a (political) representative, representing those concerns formally in a Change Lab at the next level? Can an interconnected set of Change Labs yield cumulative products that would provide input into steering policy at the governmental level? Can representatives sent to a later Change Lab bring back reports to the members of their original Change Lab? In other words, can Change Labs yield more *durable sets of collective stakeholders*? Or are these stakeholder sets ephemeral, briefly representing participants in a functional sense, like the users in a PICTIVE or Contextual Design study?

All of this is not to say that I oppose eradicating homelessness, of course! To the contrary: Homelessness is certainly a problem that should be addressed, and the Housing First strategy seems like one credible policy for addressing it. National strategies have to be set by some regulating body in order to be achievable; they can't be codeveloped by every individual who is tasked with implementing them. These implementing individuals have to comply with the policy directives they're given in order to make programs work, and it usually helps if they believe in (i.e., do not question, reformulate, or try to improve) the policy objective that they are given. If Change Labs can help that implementation work along, that's an important contribution.

Yet Change Labs were developed to do more. As Engeström and Sannino continue their work, I am eager to see how they develop Change Labs further, scaling it to address the challenges of the new unit of analysis they propose.

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