

Awareness is the First and Critical Thing



Conversation with Professor Wanda Orlikowski
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C. O. Scharmer: Wanda, what underlying question does your work address?

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I. Structuration Theory

Wanda Orlikowski: If you want to understand how I think about my work, you need to understand structuration theory. It profoundly influenced me, it really touched a chord. I think it helped me understand how it is that we create the systems and the structures that then shape us, that in some way get away from us. **But in understanding how we create and recreate our structures there's the possibility for changing them.** How I got into that was I went to NYU to do my Ph.D. in the Information Systems department at the business school. ... I thought I was going to study database theory.

COS: Really?

Wanda Orlikowski: Yes. I had minimal behavioral science training in my undergraduate work. And I was lucky enough to stumble, literally stumble, into a wonderful course on the philosophy of social science given by Wolf Heydebrand. That course changed my life, my intellectual life. It introduced me to sociology, and Giddens, and a whole different way of thinking about the world. I changed my entire orientation as a result of that course, and switched to studying the interactions between technology and social systems in the social world. The key question for me is this recursive relationship which I understand in a structurational way between the artifacts that we create that then, through our use of them, shape us and our actions, and how they enable us to do some things but they also constrain us. Essentially, I focus on how we shape tools that then shape us, or at least shape us through our use of them in particular ways. It's recursive. It's not a one-way relationship. That's really been the fundamental assumption underlying my work, and trying to understand this fundamental recursive relationship within organizational contexts.

COS: And then, as I understood you, not just to understand it but also to understand the conditions that allow it to shape or influence or to change the direction...

Wanda Orlikowski: Right. So I'm very interested, for example, in the conditions under which people use technology to do something really different. Or what are the conditions under which they use the technology to essentially reinstitutionalize the status quo, as it were. What are the conditions, the triggers, the motivators that allow people to really change the way they work? Or the way they organize or the way they relate? So the studies I've done examine the use of different kinds of technologies in different kinds of contexts, but the fundamental relationship that I'm looking at is the same. People's conditions are institutional such as meaning systems, incentive structures, norms, language, hierarchy, etc. They are also interpretive, such as people's mental models, motivations, skills, as well as technological. Different technologies have different features or material properties. Finally, there temporal and spatial properties. I have become very interested recently in the temporal and spatial conditions under which people can act differently, and through acting

differently, how they can change the structure that they operate within. These are the key questions I've worked with.

II. Most Studies Are About People Doing More Of The Same

COS: So what is it that you encountered with that question?

Wanda Orlikowski: A lot of disappointment.

COS: A lot of disappointment, how come?

Wanda Orlikowski: Because most people don't do things very differently. Most of my studies, if you look at them, are more about people doing more of the same. In fact, finding very little degrees of freedom for people, either by choice or — coercion's a strong word — but by the force of their situation, because of career paths, or because of political pressures, or finding it very difficult to try and do things differently. Very often, even though the espoused reason is to try and change the way we work with this new technology, in reality the practice has often been more of the same with technology. So things may have become faster, or perhaps more efficient, but not necessarily different, and not necessarily enabling people in new ways. So that's been the empirical reality, at least in the companies I've studied. It's rare to find people really doing things differently, improvising, innovating, changing the work structures that they operate within.

COS: So those were some examples that you studied, right? Did you encounter some cases in which you did observe more improvising?

Wanda Orlikowski: Yes. I did certainly in a few cases, but if you weigh up the ones where I found more of the same and the ones where I found people improvising and innovating, the evidence of ten years is--

COS: It's interesting, isn't it? Did that come as a surprise to you?

Wanda Orlikowski: A little. **I think I was naive about institutionalized power.** In a way, perhaps I've bought into the very techno-vision that I espouse as misleading and simplistic. There is this idea, this hope that perhaps we could use technology to change the world and that is naive. It takes exceptional people in circumstances that are conducive, supportive of experimenting and risk-taking and innovation to make changes. I'm not talking about minor changes -- I saw minor changes everywhere. I'm talking about fundamentally changing how people work. That's rare, and as I say, I think it takes exceptional people in institutional contexts that are supportive, conducive, encouraging, and nurturing of that kind of attitude and orientation towards the world.

COS: So what sense do you make of that? Of that first finding that in most cases there isn't much profound change?

Wanda Orlikowski: I don't think people are aware of their institutional contexts, and they tend not to challenge the status quo. I think we routinize work very easily, and people easily accept that. There's this wonderful line from the movie "The Truman Show." Have you seen it?

COS: No. I should.

Wanda Orlikowski: The line is "**we accept the reality with which we are presented.**" And I think most of us do just that. We accept the reality with which we are presented. I think that's why apartheid survived for so long in South Africa until people finally began to say "Enough," and then tried to stop it. I think we just accept that this is how things are and that this is how things should be, and we don't think that it can be different.

I think this is how it is in organizations too. You join an organization and very quickly you get socialized into the norms, what's acceptable, what's not acceptable. You don't want to rock the boat, your political career's at stake. Very quickly you get seduced, coerced, coopted, and you find yourself going along with it because your own survival and progress within the institution are at stake. If you want to stay, you allow yourself to get caught up with it all, and before you know it, you've developed habits of mind as well of habits of action that reinforce the status quo. You forget that things might be different, that we could do things differently. I think people forget they have a choice. Obviously, the consequences of that choice are often tough, which is why even if people recognize they have a choice they might not act on it. Often the consequences of choosing to go against the mainstream are negative. But I'm not even sure people are aware that they have a choice. Too often we are too easily lulled into a sense of this is how it is and we'll just keep doing it. So it's the structural reenactment of yesterday's structure today without much explicit awareness or choice.

COS: So that's a very obvious mechanism, and yet in South Africa and eastern central Europe and in other places we do see a profound change going on, at least on the surface.

Wanda Orlikowski: That's right.

COS: To get back to the other part of the question, what are the conditions that enable *not* reenacting the old structures but doing something new?

III. Enabling Conditions For Enacting New Structures

Wanda Orlikowski: I'm not sure that the examples that I have would apply to the political cases, but they might. If there are people with vision and courage who are willing to see an alternative and then create conditions that make a space for people to act differently, then perhaps others may begin to see that it is possible to act differently, that there are alternative ways of acting. That might build excitement and momentum around the possibilities and alternatives. That creates a reinforcing cycle that then rewards and supports ongoing movements in the direction of change. You don't just have the initial big spurt that then dies down because it couldn't sustain itself. Sustained commitment to change -- whatever the hurdles one may encounter down the road -- takes people at all levels, getting engaged, seeing the possibilities, getting motivated, and being willing to act differently tomorrow than they did today.

COS: Have you seen such a change going on in any of the organizations that you have studied?

Wanda Orlikowski: I haven't seen a change that involves a company that was thoroughly enmeshed in one social order fundamentally shifting to a new order. I have seen change occurring in environments where there already is an openness to change, that is, in environments where people were already willing to take risks and be open to questioning and challenging.

COS: What would be an example of the cycle that you mention which reinforces this kind of behavior?

Wanda Orlikowski: A good example would be someone who does something different, and instead of getting punished gets rewarded, despite the outcome. Even if it didn't quite work out as anticipated, you reward the effort not the outcome. And the opposite, you don't reward people who keep doing the same. That would be at the level of incentives. You also need to reinforce these changes through the actions of opinion leaders -- role models who begin to act differently and create some templates for actions. So people begin to see respectful others acting differently and this way changes may be sustained and reinforced.

COS: So the first thing you mentioned in response to the question, what does it take, is people, right? Would that be in accordance with the structuration view?

Wanda Orlikowski: The core of a structuration ontology is that it's an agency-structure --

COS: Cycle.

Wanda Orlikowski: -- recursion. The agency is what people do, the agency is inherent in people's capability to act. That's why I say it starts with people and what they do. I don't see any other way that we can change the social systems we're in and their structures. **That for me is a fundamental insight -- that the social systems and the structural properties of these social systems are not "out there," independent of us, but that they are created every day through our thinking and through our actions. So, we literally bring structures to life.** So if all of us in one organization stopped acting a particular way, we would enact a different set of structures.

IV. Enacting Structures

COS: What do you mean by structure?

Wanda Orlikowski: In Giddens' view, structure is understood paradigmatically, as a virtual order, that is, it is manifested in the structural properties of social systems. An example that Giddens uses, which I think works quite well, involves language. When we use language we use words in a particular way, but we don't realize that what we are in fact doing is enacting a structure. If you look at people's language, there's an evident structure around grammar and syntax and semantics that you can see in how we use language. The rules of grammar etc. are evident in our use of the language. So we have people's action that is shaped by, but that also recreates, because it reinforces, the rules that give rise to or that allow for our action. Traffic is another example I sometimes use. Everybody gets into their cars and they drive along the road. If you observe the behavior of the system, people stay in lanes, stop at traffic lights, follow the rules of the road, etc. If you step back from the system you begin to see there's a pattern, a structural arrangement that is constituted through people individually, and collectively, enacting particular rules and resources of the road.

COS: But if they weren't enacted they wouldn't exist.

Wanda Orlikowski: Yes. If people got in their cars and didn't obey any of the traffic signs, and it was just haphazard, they might enact a different structure, perhaps, but there wouldn't be the structure that we recognize as that of a traffic system. That's one thing about structures: they're recognizable, because repeated and recurrent.

In organizations you have structures around who has authority. You could look at any organization, and there's a pattern that emerges around who can do what, when they can do it, how they can do it, what are the incentives, what they get rewarded for, etc. This shapes what people do, even as their action then recreates it, at least, usually.

COS: So from that point of view, the way to rephrase your question would be what does it take to reenact structures in a way that they themselves would evolve over time and change their patterns? Would that be right?

Wanda Orlikowski: Yes.

COS: Before taking that step, could you tell us about the particular perspective that you have used, the lens of situated practice? Could you give us a little bit of a context around how that became important for you? And also, what have you experienced or encountered while using this lens?

V. Situated Practice

Wanda Orlikowski: The focus on practice is completely consistent with the structurational view. That view says it's all in the practice. Structures exist because people act the way they do, so that structures emerge from or in the practice. So you need to understand the practice to understand how it is that people create the structures within which they work. The focus on action and practice is central because of my theoretical, or ontological commitments. It was clear that's what I had to look at, so it wasn't even a choice, I think. I was certainly influenced by various people. Lucy Suchman, for example. Her book came out around the time I was doing my dissertation so it was very influential. But also Jean Lave, and all the social construction of technology people, who encouraged an ethnographic stance towards the world. They suggested that the methodological lens I should take to my phenomenon should be one of practice. And I don't know how you can look at practice without looking at situated practice. So those two for me come together.

COS: When we talk about practice and using practice as a lens for looking at social reality, what is it that we are really focusing on? One way to understand it is to ask the question, what is it that we are not looking at? What is excluded by it? What in the social universe is excluded when we look at practice?

Wanda Orlikowski: Okay. By looking at practice you are also looking at the social context and the institutions that get created through the practice. So it's not that you're just looking at practice. Of course, there's less of an emphasis, for example, on deep-seated, unconscious or repressed emotions, for example. When I look at practice I look at what people actually do. How they act in the world. As a result, I am very interested in their social constructions, their mental models of the world, and what interests they have. But you have to bound it somewhere. So, I have not taken a psychological lens, and on an individual level I have tended to exclude very deep-seated or unconscious kinds of motivations because I do not have the skills to examine those. On a more institutional level, you also have to bound it, at least within an empirical study. So I study organizations and look at the practices within an organization or within a group and how the specific actions people take on the ground enact the structures of the group or the organization. Of course, groups and organizations operate within an industry, within a nation state, within a global,

capitalist system, though I have tended not to look beyond the organizational level, and that is a limitation.

It is also important to keep in mind that there are people who take a practice lens that might not accept some or any of the assumptions and concepts of structuration theory. The ethnomethodologists, for example, who do wonderful work examining micro-level practices, do not necessarily use the lens of structuration theory. They have their own lenses, but they don't have the specific ontology of structuration. So for me, when I focus on practice using a structural lens, the phenomenon I choose to study is people's use of technology within a group or organization, and that tends to downplay, empirically, the broader institutional context of nation-state, regional economics, and the global context. You always have to bracket something when you study anything. Unfortunately, none of us can study everything. I have chosen to take this particular cut at it.

COS: So in the most general terms, your work is really concerned with the process of social reality enactment?

Wanda Orlikowski: Within organizations and around the use of technology. Yes.

COS: If you look at your own work, but also at the work of other people in your field, what have we accomplished up 'til now in terms of addressing the questions that you raised?

Wanda Orlikowski: The question around organizational reality, right?

COS: Yes, enacting organizational reality. Specifically, what does it take to move from reenactment to --

Wanda Orlikowski: Quite honestly, I'm not sure we've done very well as a field. My field is defined as organization studies and organization/technology studies, and if I look at what is in the Academy of Management Conferences or in the Organization journals, I think we certainly have come some way towards recognizing some of this enactment premise -- that we create the structures that then create us. But I don't see that the acceptance of that view is very widespread in the Academy. There have been many accomplishments in other paradigms, with other theoretical lenses, but from where I sit, I don't think we've come very far in organization studies towards recognizing the tremendous possibilities we have for designing very different work structures and organization structures and uses of technology. So I end the century on a pessimistic note -- but with hope for the future.

COS: So what is it then that we do know?

VI. What Do We Know?

Wanda Orlikowski: In organization studies? Do you mean from the other lenses?

COS: No, in regard to your question.

Wanda Orlikowski: I think there are a group of us who would say we know that technologies get implemented with particular agendas, with particular social interests. Technologies aren't neutral tools with neutral objectives. We know that when people appropriate technologies into the work places, they end up using them in all sorts of ways that go way beyond what the designers ever anticipated. We know that there is an evolution, an emergence of different and new uses of technology that change how people work, and that this in turn changes the technology and its uses. It's recursive. We know that technological artifacts are not closed, fixed, or deterministic. We talk about technology as if it were one thing, as if it were monolithic and fixed and stable, but, of course, it's constantly shifting, it breaks down, it wears down. Technologies are evolving, changing, emerging – they are not stable. Likewise, our practices of use are constantly evolving, constantly changing as we change, as our understanding of the technologies changes, as our organizations change, as our responsibilities or interests change. So I would say there's a group of us who know all these things about the interaction between people and technology in organizations, and a lot of us know that technology on its own is not very useful, that it has to be used to be meaningful and consequential. This view is in contrast to the view that suggests we can understand the value of technology by just assessing its presence through counting the number of machines, or dollars spent on technology. I don't think the question "what is the return on investment of technology?" is organizationally useful. It may be useful from an economic perspective, but from an organizational perspective I think we have to be asking "what is the return on *use* of technology?" Use is what matters not the mere presence of the technology on my desktop. What I do with the technology makes a huge difference in terms my productivity and creativity. Technology on its own doesn't help us understand the dynamics of how using the technology enables and constrains particular performance or organizational changes. So a group of us would say all that, but I don't think it's widely shared.

VII. The Blind Spot: The Idea That The Truth Is Out There

COS: What would you consider the blind spot of the approaches to understanding the question that you pose, that we have seen over the last decades?

Wanda Orlikowski: It's probably the same blind spot that affects a lot of other fields, too. The TV Show - the "X-Files" - has the catchphrase: "The Truth is Out There." It is an interesting play on words because the show is about the possibility of extra-terrestrial life. But coming back to the blind spot, there is this idea in society in

general, and certainly in the organizations field, that the truth is out there. There is this idea with respect to social reality that there is *a* truth, *the* truth to be found, and it's out there, and it's external, and universal, and stable, and fixed, and independent. And that what we need to do is find it, and all will be saved, explained, etc. I think that idea been a big blind spot. And people transfer that idea the technology, so now we have the notion that the truth is in the technology. If we can just implement the right technology all our problems will be solved. This is the technology as the silver bullet. If we could just give up on that notion and recognize that we create the truth, or rather truths, and that they aren't out there but they're enacted through what we do, and that they are provisional, dynamic, emerging, and embedded. I think intellectually, conceptually, theoretically, and methodologically that would be very helpful.

COS: What does it take to develop a research design that would illuminate this blind spot?

Wanda Orlikowski: I don't think the difficulty is in demonstrating the evidence against the blind spot. We've got lots of research that demonstrates that people create the structures that shape them, and that these emerge and evolve over time. The problem is that these studies are usually, given the nature of the lens, qualitative, ethnographic, or ethnomethodological. They are focused on practice, so the nature of the evidence is not persuasive to folks who are in the blind spot. I don't think the difficulty is in the evidence or demonstration, the problem is that it is not persuasive.

COS: So that's talking about the blind spot as embodied in the mainstream. But if you talk about the inherent assumptions of the blind spot or the limits in your own approach that has prevented you from getting to another level of understanding, what would you, in reflecting on your own work, see as limiting or inhibiting another level of understanding? If you look at the perspective of situated practice, what are the inherent assumptions that limit the perspective in terms of what future research could provide?

Wanda Orlikowski: I'm hearing two questions so let me clarify. One is, what are the blind spots in my own work? The other is, what are the limits of a situated practice perspective? The latter question is more general, it asks about the whole lens. The former question is more personal, more specific to my work.

COS: Well, actually, I meant both. My assumption was that this would be the same question.

Wanda Orlikowski: No, I don't think it is, so maybe I can clarify why I think they're different.

COS: Yes.

VIII. Limits to the Current Work

Wanda Orlikowski: A lot of the limits to my own work are practical. I don't have enough time to study situated practice. Unfortunately, I don't have an army of doctorate students whom I can work with. So getting time to do intensive field studies is extremely difficult. So an important limit to my work is that I'm not always able to spend as much time in the field to get the depth of understanding that I think is necessary.

Another set of limits to my work have to do with the structurational lens I carry with me. That is a big blind spot for me because that is how I see the world. Structuration is my ontology, it is the way I see the world. So, currently, I can't see the world other than in terms of this ongoing and recursive enactment of agency and structure. That's clearly a blind spot. We all have our blind spots on the level of ontology, because we have to have some basic meta-theoretical assumptions to even begin thinking about the world.

That's why I said earlier that the way I use a practice lens is a little different from other people. I carry a structurational lens that has been a guide, a foundation, but as with all such things, it enables and constrains. It does help me when I study practice to see what structures are being enacted through the situated practice recurrently over time. It also helps me to look for some generalizations about the patterns of enactment associated with particular social structures and particular conditions -- institutional conditions, interpretative conditions, technological conditions, temporal-spatial conditions, etc. The structurational lens allows me to make some bounded generalizations from situated practices. I'm very interested in understanding the situated practices, but because I have the theoretical lens of structuration, I see these practices as instances of a broader structuring process that allows us to see various patterns of enactment. What I've tried to do is to understand various patterns of enactment that are associated with people enacting particular structures, with particular technologies in particular contexts, and then see if there are some comparisons we can make.

I know people have argued that the problem or limitation of the situated practice lens is that they findings don't generalize, that everything is highly specific, which is the same concern raised about very ethnographic work. To frame that as a limitation suggests that you have a particular model of what science or the scientific endeavor should be, and that is that it should only lead to very abstract generalizations. I don't agree with that. I've certainly learned a lot from highly situated ethnographies and gained deep insights from ethnomethodological studies. To me those studies can be very insightful on their own. I don't see that they also have to subscribe to a particular single model of social science.

COS: So what the is the purpose of science from your point of view?

IX. The Purpose Of Science Is To Deepen Understanding

Wanda Orlikowski: For me, the purpose of science is to deepen understanding. To deepen understanding so as to allow people to make a difference in the world. I think it's quite ironic, but the mainstream view of social science is that it is about prediction and control. And yet, through teaching, through consulting, through public dissemination, so much of what social scientists do is about helping people change the very phenomenon that they think they must be able to predict and control. So there's a contradiction between the sort of neutral observer, "I'm here just to understand what is going on and make predictions about how particular forces act on people" and our teaching, where we try to help people understand the forces so that they do something different to avoid, undermine, or change the forces. That pragmatic orientation is not reflected in the science that we do, the mainstream social science that tries to identify external independent forces that shape reality. But if we really believe there were these external deterministic forces, such as technology, why try so to help people be more effective workers or managers, why bother trying to help them do things differently? Giddens talks a lot about this, and that's been very influential in my way of thinking about it. He makes a strong distinction between social and physical sciences. In the social sciences, the people we study appropriate the concepts that we come up with and change the reality that we've studied. It's what he calls the "double hermeneutic." As social scientists, I think we should accept that, recognize that, work with that, even embrace it. I don't think our mainstream social sciences do.

COS: What is, in your own experience, the relationship of your work and the social system that you study? What is the role of your work in that system?

Wanda Orlikowski: Well, people will appropriate our concepts whether we actively encourage them to or not. Someone reads an article or a memo and it changes the way they think about something and they act differently tomorrow. That's one thing about practitioners, they are very practical. If something makes sense and it seems useful, they'll do it. The people we study are influenced tremendously by a whole range of things, not just formal education or consulting, but through what gets into newspapers or reports or the conferences they go to. There's a whole range of influences that they experience and appropriate.

I would like to be a little more actively involved with helping people interpret and help implement some possible changes that come out of the insights I've gotten through doing the research. I have shifted my position over time on this. I would not have said that earlier in my career. Now I see things a little differently. For example, I have recently been studying virtual workers. One company I've studied has a large distributed team that I have studied and I've run a couple of workshops with them,

and we've had a fascinating dialogue talked about design alternatives for trying to deal with some of the issues that were very evident in my findings.

COS: Is it also true that you find the reenactment of patterns, rather than evolving new patterns of interactions, in virtual work?

X. Patterns of Virtual Work

Wanda Orlikowski: Not as much. For those virtual workers who have worked for a long time for a particular company, and then essentially take that same activity and go solo, there is initially a lot of reenacting of how they used to work in the company. But they do then realize that things are different when they're on their own. And then I find a lot of people trying new things, improvising, really figuring things out as they go, because for a lot of these people it's very new to be working on their own, out of their homes, with no corporate safety net or structure. Most have not done this before.

COS: So they have just left a large company?

Wanda Orlikowski: Many of them have.

COS: And yet they form a team or a virtual collaboration?

Wanda Orlikowski: Sometimes. Some of them continue working on their own. It depends on the nature of the work and environment they're in.

COS: So they encounter a real new life, right?

Wanda Orlikowski: In a way.

COS: And what is it like?

Wanda Orlikowski: Well, I'm still analyzing my data. There's a range of people who are doing very well and they've found a routine, and a product or service that they have clients for, and they can keep repeating that. There are others who are struggling to make ends meet, to find new products, and clients. For some people there is a big identity crisis where they are struggling to figure out who they are now – that is, “who am I, if I'm not vice-president at Corporation XYZ?” What I've been looking for across these studies is a set of common practices that these virtual workers engage in that helps them deal with this new way of working. And there are a few that I've identified which I think are quite common. They have to do with trust, reputation, security, identity, networks, impression management, and managing the tremendous anxiety about where the next check is coming from.

COS: What would be a question, or a set of questions that you would consider important for future research, and that would also spark your own energy?

XI. Areas of Future Research

Wanda Orlikowski: I'm not sure I would necessarily do much that is different. I'm really interested in how we can enact things differently, how we can use technology in innovative ways to do things differently. So perhaps I could be a little more strategic about looking for situations where there are real possibilities for enacting fundamentally different ways of working. This is what I've tried to do some with my virtual work project. I might also work in some very experimental, prototyping situations where we might see if we can create environments upfront. What I've tended to do is to study after the fact, or during the fact, of a technology implementation or change. I would not want to create artificial environments. I'd like to find organizational or community environments where there really is an openness to possibilities, and perhaps help create new technologies that enable new ways of working. Then by watching, helping, studying, and observing over time, we might be able to see the emergence and evolution of different ways of working.

So I'm not sure I would change my question, I might just be a little more proactive about creating the conditions to study the things that I think are critical to understanding the possibilities for enacting changed conditions, changed structures. It would be more useful for me if there were more recognition of this notion of structuring and enactment, and an openness about the social structures we live in. Rather than accepting that "this is how it is."

COS: What is it that would help them to recognize this openness?

Wanda Orlikowski: I do think we're seeing a lot more experimentation now with new organizations and forms and technologies. Some of this new work may be creating an opening for challenging some of our taken-for-granted assumptions. I'm a little more optimistic going forward by people's willingness to try new things. The Web and all the startups around that have certainly fueled interest in doing things differently. And that creates examples of how things may be different. With such examples and people's reflection and discussion about how they were able to do this, this may perhaps shift people's awareness of what is possible. For many of the virtual workers I'm studying, there has been an initial recognition that "I could be doing this on my own, I don't think I have to continue working like this, for this large institution." And that, I think, is part of the shift. Of course, it also helps if we have influential and supportive colleagues saying things like that, and helping others to make it happen in their own lives.

COS: But then, even in that new role it probably is not a question of going to the other extreme, which would be to reinvent your pattern of enactment every day. You always have a mix between the new routines and old.

Wanda Orlikowski: Absolutely. We all need routines, otherwise we'd go insane. It's the difference between mindlessly enacting the structure, because I just haven't sat down and thought about it, and saying I'm going to continue enacting this out of my choice and because I think it's the most effective at the moment. But of course, all structures are only "stabilized for now." They are only virtual enactments, temporary, provisional. I think recognizing that this is the structure that works right now and provisionally will continue to work until we recognize something else, choose to do something else, is very important. It's awareness, choice, and action. I am choosing to enact things this way today, but I can choose subsequently down the road to try and change that.

Now, recognize that when I say "I choose" it is not the case that one person can change a structure. It takes collective action. But at least we could have ongoing dialogue within a group or an organization or a community to examine, even if periodically, the structures we are reenacting right now. Are they still the most effective that we know of? What are their side-effects? What are the unanticipated consequences of these structures that we enact every day? At some point we are going to say it's not working as well anymore, let's shift, let's try something different. Having that dialogue about the social reality we create is what I think is missing. We need structures and we need routines. We need these to be "stabilized for now." But at least let's be aware of that and let's consciously reflect on the structures so that we can change them when we deem it to be appropriate and desirable to do so.

XII. The Willingness to Act on that Awareness

COS: So what you're saying is that dialogue is needed in order to escape that eternal reenactment of the same old pattern. A dialogue would enable the people in a system to see what they are doing and to see the whole process of enacting.

Wanda Orlikowski: That's right. It would help them recognize their collective enactment, their collective complicity, even though that's a very strong word. Collectively they are enacting the structures that shape them, and that both enable and constrain them. We all need structures in order to operate, whether in our family life or our social life, or our work life. But I think we need to have conscious, deliberate reflection and dialogue about what structures we want to enact so that we can enable the things we care more about, and constrain the things we care less about. We need to recognize that change is inevitable, because we change as individuals and groups, and the social and material environment also changes. Thus, at some point the structure that was so enabling is no longer, and we should think about changing it. Exploring possibilities, learning, reflecting on alternatives will help so that when the time comes we can make that shift to something different. This awareness of our role in creating the contours of the social systems we live in is so different than what

currently operates. And I mean social systems broadly—family, education, work, and community.

COS: So we really need a whole new generation of social technology that would enable us ...

Wanda Orlikowski: What do you mean by social technology?

COS: I mean some kind of tool or methods that would enable you to have this sort of perception in social systems, to have this reflective conversation.

Wanda Orlikowski: I'm hesitating, because when you say technology or tool, I worry, because I think those are means not ends. I'm interested in getting people's recognition and awareness so that they can act differently. That's the ends. There can be multiple means to implement that. And tools and methods may be just one kind of means to get to those ends. For me, awareness is critical. And when we focus on tools, there is a worry that we fall into the trap of saying let's just invent a tool and that will solve our problem.

COS: So what then would increase that awareness or bring about that awareness?

Wanda Orlikowski: Well, I think some of the work that SoL's been doing, for example, is very helpful through some of its courses and research programs. I would want to bring into those program and courses some awareness of how we create the structures of our social systems -- more of the work that Peter and I have been doing in our "Enacted Systems" course. If people can begin to see the structuring dynamic operating in their daily lives, I think that awareness could happen. And then, of course, you need a supportive environment that allows people to engage in experimentation and reflection, and have a conversation about alternatives. It's risky. People are concerned about the consequences of changing the status quo.

COS: So are you saying that the critical bottleneck from succeeding and switching from reenacting old patterns to change, or doing it differently is awareness, the capacity to increase the awareness within a social system?

Wanda Orlikowski: Awareness is the first and critical thing. But you also have to have people act on their awareness. Unless people act, things won't change. Because it's what people do that makes the difference. Take me, for example. I am aware of some of the structures that I enact, or continue to collectively enact within my work environment. And I'm aware that these structures could be different. But there are some things I don't act on, even though I might have the awareness, because I don't choose to act on them -- perhaps the environment does not support me in taking those risks.

COS: Then taking your own example for your question, what would it take in your case?

Wanda Orlikowski: In this context, I need to understand where the authority is located and getting support from that source. And getting a mandate to create a group of people that have a shared commitment to doing things differently. That's what it would take. Given this context, the mandate would probably be coming from both the top and from some of the other powerful groups within the institution.

COS: But in South Africa and Eastern Europe, we have seen other patterns of revolution, which weren't led by the top, and by the center of the old power base.

Wanda Orlikowski: Yes, I think there are alternative ways of enacting change.

COS: Which become more and more important for organizing companies.

Wanda Orlikowski: Change is very context specific. Some grassroots' efforts can build momentum, even if they are underground, and can create an environment where people are willing to join and participate and take risks. In a highly individualistic environment, it's a lot harder to build momentum for collective action at the grassroots' level. The South African example comes after 30 years of tremendous struggle and violence and death. That was a very complex situation. And it wasn't one thing only. There were a lot of factors including economics that helped to sustain the grassroots efforts. International sanctions, for example, forced the South African government to be more open to the possibility of negotiation. Without that international pressure, I don't know if the change would have come when it did and in the way it did. Every situation will have its own dynamic and logic. There are elements we can look for — economics, military, institutional, grassroots. But we have to take into account the specific context, the people, culture, and the specific time period. I would say the same about organizations.

COS: And yet, isn't it amazing looking at the Soviet Union after 70 years of that experiment of "let's create a different type of organization and a different type of man"? All of a sudden all of that force has gone away. This direction of the way of organizing socialism was blown away. There was this rise of all these grassroots movements throughout Eastern Europe and also in the Soviet Union. What really is the source of that sort of innovation? Where does that really come from? For example, how would structuration theory account for the change we have seen operating there?

Wanda Orlikowski: I am not a political scientist so I not well equipped to answer this. But let me just say that on one level there are huge differences, but on another level, the kinds of structures that people living under a communist regime were enacting, were as numbing and reified as any others. Some were as institutionalized as some of the structures here in a number of our bureaucratized organizations. In

structuration theory, agency is defined by people having the ability to choose to act differently. Within the theory is this notion that people, with awareness, can choose to do differently. That's where some of the grassroots' movements come from. So the Solidarity Movement in Poland, for example, is a good example. Again, it's very context specific. There's a very strong communal culture, strong bond: the Polish identity has a very rich history that's forged out of centuries of long oppressions and occupations. Part of being Polish is being opposed to whatever the current occupying forces are.

COS: Usually Germany or Russia, or both.

Wanda Orlikowski: Right. That sense of a common struggle against a common enemy is deeply embedded, and it is a unifying bond. You combine that with the religious, communal forces, as well as the knowledge that people had that things could be different – Poland had been independent briefly between the two world wars and then of course, the West offered lots of examples. I think change comes from people's awareness that things could be different, that it could be otherwise. It comes from people's capacity to say no, and their courage to act on that commitment. So I think that's where the impulse comes from.

COS: It comes exactly from where?

Wanda Orlikowski: If you recognize that things could be different. And then you choose to act on it.

COS: They sort of recognize that it could be different in theory all along, but the second part of your --

Wanda Orlikowski: That's why earlier I said it's not awareness alone, it's always awareness and action, the willingness to act on that awareness.

COS: So what is it that allows people to do the second step? Because I have been in Eastern Europe before and have had lots of conversations about all these possibilities. But there wasn't this readiness for your second condition.

Wanda Orlikowski: I don't have a secret key to give you. As I say, I think it's very context specific. A lot of it is timing. A lot of it is the social and economic conditions. In the case of both Russia and South Africa, economic sanctions made a huge difference. So attempting anything in South Africa in the '70s was not possible, the government was just too strong and it crushed any attempt at grassroots action – just think of the Soweto riots of 1976. But in the late 80s, the economy in South Africa was crippled. The same happened with the Russian economy. So I'm sure there's not one specific thing. It's more like a collection of interacting elements that create a set of conditions, a set of circumstances that allow for something to grow, that give it impetus. And, having courageous people willing to take a risk, then others who build

on that. So, it's an emergent process, it's not one single thing, That would be a blind spot of 20th century social research.

COS: To look to the single --

Wanda Orlikowski: Looking for the magic bullet again; the single factor that explains it all, across all paths, all contexts. Where there is an interdependence of multiple institutional, economic, technological, cultural, and interpretive conditions along with motivational factors like the will of the people, their morale, courage, etc., not to mention timing, there cannot be a single explanation.

COS: Thank you very much.

Wanda Orlikowski: You're welcome.

XIII. Reflection

Learning as situated practice and structuration theory belong to the most significant accomplishments in social thought during the 1980s and 1990s. Orlikowski's work, like that of Suchman and Whalen, reveal to us a healthy dose of current reality. All three scholars exposed themselves to what is actually going on in companies at the level of work practices. What did they encounter? What themes do we see emerge from their work?

There are two themes that struck me. The first theme is that people, on a micro level, constantly improvise, work around constraints, and co-develop their work practices and technologies in-use. The other theme is, as Orlikowski suggests, that in spite of all the noisy management rhetoric on transformation and change, there really hasn't been much profound change at the level of work practices. In reality, it's more of "people doing the same;" it's more of reenacting the patterns of the past.

What are, asks Orlikowski, the conditions that allow people to really change the way they work? The key factor, she suggests, is awareness. "Awareness is the first and critical thing"; awareness and, she adds, "the willingness to act on that awareness." This key proposition opens up new research territory: how our quality of awareness changes the quality of what we enact. This is where her work is linked to that of Arthur, Varela, Rosch, Bortoft, and Nan, who all explore this least tangible realm of social reality creation: the different qualities of awareness from which we can choose to act.

XIV. Bio

Wanda J. Orlikowski is the Eaton-Peabody Chair of Communication Sciences at the Massachusetts Institute of Technology, and a Professor of Information Technologies and Organization Studies at the MIT Sloan School of Management. She received a Ph.D. from the Stern School of Business at New York University. Her primary research interests focus on the dynamic interaction between organizations and information technology, with particular emphasis on organizing structures, cultures, and work practices. She is currently exploring the organizational and technological aspects of working virtually. Her research has appeared in such publications as *The Academy of Management Review*, *Administrative Science Quarterly*, *Information Systems Research*, *MIS Quarterly*, *Organization Science*, and *Research in the Sociology of Work and Occupations*. Orlikowski's work stands out in terms of her unique capacity to combine and integrate diverse intellectual traditions such as ethnographic in-depth field studies on situated work practices on the one hand, and Giddens' structuration theory on the recursive relationship between agency and structure.