

# Toward New Machineries of Machineries

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## ABSTRACT

This positions paper, done in the form of an interview, presents my interests and experience in relation to the Making "World Machines": Discourse, Design and Global Technologies for Greater-than-self Issues at the fifth decennial Aarhus conference, Critical Alternatives.

## Author Keywords

World machines; civic intelligence; civil society; alternatives; social computing; participatory design; grand challenges

## ACM Classification Keywords

K.4. Computers and Society.

## INTRODUCTION

*We recently tracked down Douglas Schuler in his untidy basement office on a rainy Seattle morning. He was hard at work, tinkering with several half-built world machines, which, as luck would have it, is the very subject that we had planned to ask him about. If there was time we also wanted to ask him also about film stars, fashion, and whether there is intelligence in the universe.*

## THE INTERVIEW

*Hi Doug. It's good to see you're safe from the rain. As you know I'd like to get your thoughts about the upcoming World Machines workshop. I'd like to know why the workshop seemed so relevant. (And if you've changed your mind now that you're supposed to be writing a position paper.)*

Almost every thing I've done outside of my personal life in the last 25 or 30 years is related to this workshop in some way. These include efforts like the Seattle Community Network that we started over 20 years ago, conferences organized with Computer Professionals for Social Responsibility, the organizations I have started, the technology projects I have been involved with, the books and articles I've written, and work I've done at the

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Evergreen State College where I teach. These, I believe, are all *world machines*, or, at the least, prototypes of world machines. And I am completely serious.

*On the phone you mentioned that you were excited about the workshop Can you say a bit more about that?*

I am particularly attracted by the explicit focus on the "greater than self" or what I generally referred to as the greater good. I'll talk more about this more when you ask me about the collective intelligence group we've started. I believe that there are millions of interesting, well-meaning, important, creative, and progressive efforts underway. The notion of these acting synergistically with each other is very exciting and seemingly possible. But I don't believe that this will happen soon enough to challenge the other dominant paradigms unless we consciously think about it and work on it. And this is one of the things that I think the workshop is aiming for.

There are lots of thing—lots of things—that put me off. One of them is the somewhat dubious claim of objectivity. Another one is the idea that we should not think about the common good, that to consciously think about it is necessarily some kind of social engineering that is implicitly forbidden. As if government and business aren't engaging in social engineering each and every day! I'm also put off by the implicit idea that all of the pieces of intelligence and technology and efforts that we develop will somehow magically integrate with each other into some utopian world that serves humankind in a stronger sense. To my mind, it should go without saying that the new developments will be inserted into a dynamic network of trajectories in progress and does have some possibility of effecting local or even broader circumstances. Generally speaking, however, these new developments will enter the capitalist system of exchanges and influences and if they show promise for profit will be leveraged / manipulated for those purposes.

*What about the name of the workshop? And the idea of world machines? Are you sure you understand precisely what a world machine actually is?*

Not at all! That's one of the reasons I'm so interested. And maybe perhaps I can help them flesh out the idea more. What I can say is that I find the idea of world machines strangely compelling. I am not sure why. It conjures up people like Blake and Walt Whitman and even the science fiction writer Ray Bradbury who wrote about the

*Machineries of Joy*. It also reminds me vaguely of HG Wells novel *The Time Machine* and the machines beneath the surface of the world that kept it running. It also reminds me of the machines in Fritz Lang's film *Metropolis* and of the machine in Forester's novella *The Machine Stops*. So while it's very compelling to me it also suggests things that are quite alien and horrific at the same time. The machine is often portrayed as something anti-human and it certainly can be the case. Mario Savio, a prominent Berkeley Free Speech activist in the 1960's made this point quite viscerally: "There's a time when the operation of the machine becomes so odious—makes you so sick at heart—that you can't take part. You can't even passively take part. And you've got to put your bodies upon the gears and upon the wheels, upon the levers, upon all the apparatus, and you've got to make it stop."

Machines have certainly been employed effectively in humankind's foulest exploits. But I don't think that the secret lays in returning to a Golden Age that existed before the machine—especially since we probably have never had one to return to. But the other issue is whether the machine is the right metaphor (and I don't know because I don't know exactly what the organizers are referring to)

*Maybe this is a good time to ask about your work with civic intelligence. Why do you think that is relevant to the workshop?*

The focus on civic intelligence has important attributes that other perspectives and paradigms don't seem to have. Intelligence, for example, is contextual—not universal. And it includes resource consideration and the necessity of making decisions and taking action regardless of whether the data is incomplete (which is always the case in "real world" situations). To some degree, it is driven by practice—but practice informed by an important and fruitful metaphor, *intelligence*, that necessarily includes perception, communication, learning, meta-cognition, decision-making, planning, memory, experimenting, hypothesis formulation, and, even less "rational" considerations like emotions, solidarity or evaluations of fairness, which happen collectively as well as individually.

Civic intelligence is critical theory—or at least it is intended to be. The underlying belief and initial motivation is that the concept can, at least ultimately be 'explanatory, practical, and normative' as described in the workshop solicitation [1]—and, ideally, the attendees at the workshop can help shape the conceptualization and realization of civic intelligence towards that end.

*Related to that, you've developed a capacities framework for civic intelligence. What's the significance of that?*

When we began to really think about civic intelligence as a social phenomena we started to think of ways that it could be assessed in some way. We started identifying *capacities* that seemed to help characterize civic intelligence [2]. We divided these capacities into five dimensions, namely

knowledge; attitudes and aspirations; organizational capital; relational / social capital; and financial and material resources. Civic intelligence is much broader than the ability to solve mental problems quickly or being able to think theoretically, attributes that are associated with people with high IQs or people who work in the academy. The first dimension, knowledge, includes the basic capacities of academia but also includes salient knowledge, the little bits of information that can be extremely important in a given context. And without providing an exhaustive account, people without the feeling of self-efficacy are unlikely to be involved and people who can't listen to others are less likely to be involved in collaboration.

*The output of one of your projects, Liberating Voices, was a pattern language for communication revolution. Can you tell us how this work could help tie in with the workshop goals?*

The pattern language that was published [3] contains 136 patterns, each of which can be used as a "seed" for various approaches to civic engagement. They are designed to inspire and inform more than they are designed to instruct. In other words, the patterns are not recipes. Individually they are intended to be used as seeds or provocations, but as a language, they are intended to capture mostly qualitative knowledge (thought / action) in a holistic way. Because of this, a pattern language might make an idea vehicle for carrying some of the ideas of the World Machines forward. Although I'm still struggling to understand the concept I'd suggest that the *Future Design, Teaching to Transgress, Open Action and Research Network, Social Dominance Attenuation, Power Research, Global Citizenship, World Citizen Parliament, Big Tent for Social Change* and *International Networks of Alternative Media* patterns—among many others—all help suggest fruitful avenues for the world machine work.

*You've also worked with other people to establish a network of people. Presumably, that's also relevant? I'm beginning to think that nothing is irrelevant!*

You're most likely referring to the Collective Intelligence for the Common Good Community / Network that Fiorella De Cindio, Anna de Liddo, and I launched in mid 2014. And yes, I think it's extremely relevant. As I mentioned a few minutes ago, we are explicitly focusing on the common good.

"The statement is intended to help focus and reinforce research and action that is directed primarily at the conscious, cooperative efforts of people in this diffuse community to explore, understand, develop, and promote collective intelligence for the common good. In this statement we use the expression "common good" to mean something that approximates a universal benefit, something that everybody — in theory — would want. Admittedly imprecise — like many of the words we commonly use, such as democracy or community — the pursuit of the

common good will generally mean finding peaceful ways to resolve conflict, building a more equitable society, securing a healthy and diverse environment for ourselves and future generations, and respecting cultural diversity."

We are also trying to create and model one way (at least) that this type of network can be established and managed. One way that this effort can be part of a larger world machine is if we somehow integrated or loosely connected with the world machine community. In other words, we build a network of networks—but how? As part of that work we identified a variety of ways that intentional and unintentional coordination could take place:

- Shared principles or manifestos
- Work supports each other (e.g. theory and practice; life cycle — produces data or ideas for the other)
- Uses similar concepts, framework, data interchange, API, taxonomy, ontology
- Commitment to each other, at least to meet and talk together
- Group research agenda group project(s)

*I know that you've also been involved in an educational initiative at the Evergreen State College where you teach. Can you tell us more about that? And are the students actually in charge? And what does any of this have to do with world machines?*

Yes, well. You're presumably talking about the Civic Intelligence Research and Action Laboratory. We're now getting ready to move into our fourth year of CIRAL. My students and I realized early on that the best way to learn about civic intelligence was to actually *do* civic intelligence. It is not just a matter of learning a few facts. In that way it's related to John Dewey, Jane Addams, and the others who have pointed out that creating an abrupt disconnect between the abstract and the concrete, theory and practice, the detached academy and the engagement of activists and community members.

But the students aren't totally in charge. The faculty members have the responsibility to set up circumstances for student learning and for evaluating students. There are also other responsibilities such as ensuring that no illegal or unethical activities take place, as well as less formal ones, but still important, such as helping to ensure that they properly prepare for community work or helping to ensure that the survey they ultimately use is easy to take and is likely to bring forth the data they need. So, to a large degree, based on the strict criteria that the work we undertake must be related to civic intelligence, the students and I have worked over the years to develop a set of processes that we'd follow. It is critical that the students take *ownership* of the lab.

*What can you say about your proposal for a World Citizen Parliament [5]? Were you really advocating a "parliament" that was modeled, for example, on national parliaments or*

*legislative bodies" And how might it be relevant to the workshop topics?*

You hit a sore spot by mentioning the fact that many people seemed to read the title and perhaps a sentence or two of the article and conclude that I was advocating the development of a monolithic "parliament" that as nearly as possible resembled the legislative parliaments that national governments often have. It was really a call to *consider*—and start to incrementally build—a socio-technological assembly—a world machine actually—whose approaches and objectives were explicitly not dictated by business or government. These ideals are explicitly covered in the workshop description when the "shared interests of a world citizenry" [4] are invoked. Here are some phrases from the parliament manifesto that supports these claims:

All over the world, attempts are being made to trivialize citizenship and reconstitute people as users, consumers, and spectators who have little input into the political process. At the same time, real power is in many ways being transferred to large corporations and other non-democratic organizations such as the World Trade Organization. We, the signers of this manifesto, hope to help counter that trend with this project.

Realizing the growing and critical importance of citizens and civil society in addressing humankind's common problems, we propose the initiation of a prolonged and multipronged focus on citizen deliberation. We realize that this is an extremely complex project that will require years of complex, nuanced, creative, and thoughtful negotiation and collaboration. We are aware that this project must address an extremely broad range of social and cross-cultural factors. We, however, believe that beginning this discussion in an explicit and open way is preferable to many other varieties of globalization that lack this transparency.

Moreover, we realize that precisely defining an ideal system in advance is impossible. For that reason, we propose to begin a principled, long-term, incremental, participatory design process that integrates experimental, educational, community mobilization, research, and policy work all within a shared orientation: specifically to provide an inclusive and pluralistic intellectual umbrella for a diverse, distributed effort with a strong focus on civil society.

Basically, the parliament idea was intended to help attract some interest in the topic which would hopefully lead to some type of coordinated action. Of course many of the pieces of that particular world machine are now being built—but will they actually be integrated together and become a viable alternative to the world machines that oppress, pollute, and surveil?

*Thanks for taking the time with me. My final questions are what would you personally want to get out of the workshop and do you have any last words for our readers?*

I welcome the opportunity to *play* (as stated in the call) with the concept of world machines with people who are likewise disposed. Hopefully at least some of the various bits and pieces of the world machines that I've worked on can play a role. I have been wanting to work on a grand utopian vision—a world machine—for nearly three decades. The challenges that we face are complex and deadly serious. Alternatives are desperately needed.

Finally, on a less serious note, I'd question whether this conceit of the "interview" actually works. Everybody knows that I wrote both the questions and the answers. The interviewer asked nothing in particular that the interviewee was not prepared to answer. But beyond that, it was a fairly easy way to get my thoughts down. And it seemed like a good idea at the time.

*Thanks again! It looks like the rain has finally lifted. If you ask me I don't think you should stay in your basement for so long.*

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