

# Introduction | Welcome to the social innovation for complex systems courses

**I'm Frances Westley** and I run a research institute here at the University of Waterloo on Social Innovations, called WISIR—the Waterloo Institute for Social Innovation and Resilience. For the past 10 years, we have been trying to understand the challenge of social innovation in very complex systems. Social innovation really is about how you transform very, very difficult, intractable problems such as, poverty, homelessness, or environmental problems, which seem to go on and on, and people are not really able to find a solution.

**There are some** success stories and there are individuals we call *system entrepreneurs* who are making a difference. We've spent the past 10 or so years studying them, trying to understand how they do it, what they do, and trying to link that to an emerging body of thinking that cuts across many disciplines called *complexity theory*.

**The assumption is** that the world we're living in, particularly around these very difficult social problems, is an extremely complex one; and that if you take a lens which we call a *complexity lens*, it allows you to better understand the nature of those problems, why they persist, and also how individuals

and groups of individuals or networks can go about trying to transform that. This is the first of three online courses on this subject, and as such it will really introduce the basic concepts that we'll be working with throughout all three.

**First we'll look** at what is a complexity and what this complexity theory tell us about how we need act differently in complex contexts in order to have an impact. We'll also look at what is a complex problem, how you would know, and how you would identify a complex problem that, in fact, these approaches could help to unlock. Once you've established that complex problem [we'll look at] the actual nature of the system and sub-systems in which that problem is embedded. This is important if you want to think about how you might transform that system to fully understand what drives it, what keeps it the way it is, and what keeps creating the problem over and over again.

**Then we'll look** at the use of scale, which is a key tenant in complexity theory and in social innovation theory. [This is] the notion that, while we all exist on what you might call a micro scale, i.e. we sit here in this room and we have interactions with each other, there

are other scales, institutional scales, geographic scales, we'll be touching on different kinds of scales that actually have an impact on what we're doing here in this room. In fact we carry those [broader 00:03:41] system, those higher levels of the system with us all the time. We constrain by it, it affects what we think, what we act, what we do, but because we're also human beings and we do have some liberty we can choose to continue to support it those systems, those institutions as ways of thinking and doing and acting, or we can choose to change it, and we choose to change it at the level where we are immediately in this room, in our community, in our homes.

When we choose to try to make a shift or a change we start the possible process of changing the whole system. Most of those changes do not have a huge impact, but some of them do. We will end this particular in a lecture, serve lectures with looking at how can we use the idea of scale to also help understand what's key to transforming systems. Throughout all these lectures and all these [mooks 00:04:49] that we're putting together these online courses. We're also very concern about giving you not

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just conceptual tools ideas that you can read  
[are other scales that have an impact].

**We also want** to give real tools, or playbooks  
if you will, of tools that can help people who  
are interested in starting or continuing to  
engage in this kind of transformative action  
some additional ammunition or support for  
how to do it, and how to put it into practice.  
We'll be going back and forth between  
conceptual material and these particular  
tools.