COMPLEX CONTAGION

Complex contagion is the phenomenon in social networks in which multiple sources of exposure to some alteration are required before an individual adopts the change of behavior. This differs from simple contagion in that, it may not be possible for the innovation to spread after only one incident of contact with an infected neighbor. The spread of complex contagion across a network of people may depend on many social and economic factors; for instance, how many of one's friends adopt the new idea as well as how strongly they actually influence the individual. In complex contagion, the probability of adopting a behavior, or an idea, varies with the extent of exposure. As an example a person might not respond when they see a piece of information on one social media site, but when they see it on another or a third this may trigger them to have greater belief in that piece of information and start to share it.

When we allow for this more complex form of contagion we now have to start to take into account different sources of contagion that may be conflicting. The spreading of propaganda may be an example of this, within a very simple homogeneous scenario where we have just one national broadcaster we will have a relatively simple contagion process, with just one single message being propagated. But in a more complex setting with multiple channels, there may be conflicting messages and we have to understand the network of interacting messages that people are receiving and also the significance that they ascribe to those different channels.