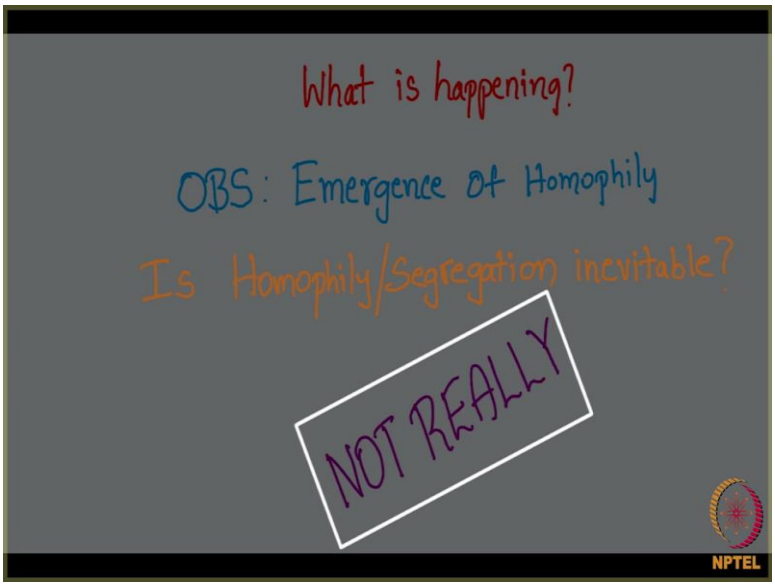
Social Networks
Prof. S. R. S. Iyengar
Department of Computer Science
Indian Institute of Technology, Ropar

Lecture – 56
Homophily (Continued) and Positive and Negative Relationships
Spatial Segregation: Conclusion

(Refer Slide Time: 00:05)

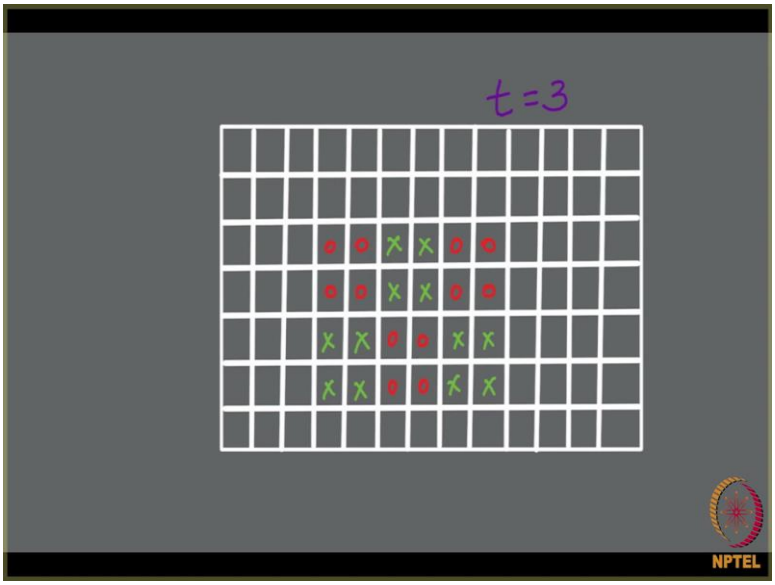


We saw the simulation; what it we just observe we observed that homophily sort of emerges, now please note the chapter the discussion has been of homophily. So, do you observe that there is some sort of a homophily here right. There is a lot of people who sort of get together and they cluster together now do you observe something. In fact, it is startling to see that local behaviour results in a global structure. What do I mean by that? A local behaviour such as one person trying to decide about his locality and trying to shift to a better locality person who is trying to see if he has a good neighbours if he does not have the required number of neighbours he shifts to a different locality he is just trying to do something locally, but each and every person doing this it results in a global phenomena correct.

So, we observe that there is this emergence of homophily here, but that is this homophily or segregation inevitable, what do I mean by this, probably my next figure that I am

going to show you we will make it clear is this homophily inevitable will it always happen not really and why do I say this.

(Refer Slide Time: 01:35)



Look at this beautiful example. Here are a few people right green and red. In fact, for t = 3 you observe that everybody is actually happy everybody has 3 neighbours who are like them correct. So, observe it carefully every green has 3 green neighbours every red has 3 red neighbours you can filled the entire grid like this; this is not a lot of clustering here all though there is some kind of clustering there is lot of clustering here people. In fact, are living harmoniously with each other there are both types of people and there is no high because segregation here and still they do satisfy this property of the threshold being 3 which means they have the required number of neighbours, but segregation is not happening.

Now, this is a surprising factor that all though there is a possibility that segregation need it happen segregation does happen most of the time. It is observed that in on the map of some countries people basically are distributed evenly rather I mean uniformly at random, but later on this slowly drift and you see this patterns of segregation emerging. All in all Schelling model beautifully captures the this notion of a people getting segregated and rises many questions like can we come out to the nice mathematical model to explain this which remains to be an open question till date.