INCLUDING SOCIAL NETWORK INFORMATION IN GEOGRAPHICAL ANALYSIS: SOME MULTILEVEL APPROACHES

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Abstract. Multilevel modelling is now well established as a statistical technique, and is very useful for studying geographical variations in social and health outcomes. This technique has been used in a geographical context to investigate the scale aspect of the Modifiable Areal Unit Problem (MAUP), migration, small area estimation, variations in social and health outcomes at the individual and area levels, as well as changes in these outcomes for individuals in areas over time. In all these instances, multilevel modelling is used to capture dependencies in the population over space, time, or both. Another important dependency in the population is the social network, yet this has been largely ignored in geographical analysis, and social statistics in general. However, it is substantively interesting to consider the role of the social network, alongside other dependencies, when studying variations in social phenomena. For example, we might be interested in variations in individual's well-being. With respect to a well-being measure, we might want to assess the nature and extent of associations with individual characteristics, both demographic and behavioural, but also how much well-being varies by *where you live*, how much by *who you know*, and the relative importance of *where you live* and *who you know* with respect to variations in well-being. Another example is the composition and support role of the social network of an immigrant upon arrival in a new country. In this talk I present some theoretical and conceptual ideas for including social network information in geographical analysis, I give some examples, including some empirical results.