



Commentary

Is Dunbar's number up?

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This article is a commentary on 'Relationships and the social brain: Integrating psychological and evolutionary perspectives' (Sutcliffe, Dunbar, Binder, & Arrow, 2011).

This review paper - crammed with fascinating ideas, findings, and speculations - nevertheless over-asserts three key matters.

First, it is unlikely that the cognitive capacities of modern humans - what the authors call 'the social brain' - limits us to 150 meaningful relationships: a number identified by co-author Robin Dunbar in his studies of primates and villagers in less-developed societies and structured military organizations. Other evidence suggests that 'Dunbar's number' is too low in the contemporary western world, especially for the two outer 'affinity' and 'active' 'layers' (the authors' terms). Even before the advent of the internet, one research team found higher numbers: estimating that American personal networks comprise a mean of 290 network members (Bernard, Killworth, Johnsen, Shelley, & McCarty, 2001). While many are acquaintances at the moment, they can be called upon when needed (Rainie & Wellman, 2012). A different technique shows even larger networks, estimating that Americans know a mean of 610 and a median of 550 people, with women knowing 9% fewer people (590) than men (650). The range in network size is vast, with 90% of the adult population knowing anywhere between 250 and 1,710 others, and half knowing between 400 and 800. This estimate of network size is larger because the researchers took into account the difficulties people have in recalling common first names. As Johnny Cash has taught us, people are more likely to remember a boy named Sue than a girl named Sue (Zhang, Salganik, & Gelman, 2006).

In addition, social media such as Facebook have increased the carrying capacity of relationships, with heavy internet users having more close ties (Hua & Wellman, 2010; Boase, 2008). It takes little work to maintain large numbers of hardly known (or long-lost) ties on a 'friend' list.

Yet, even the large numbers underestimate the number of people that each American adult knows - because they are all based on recalling names, and people will forget some others until they meet them or are otherwise reminded (Goel & Salganik, 2010).

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People know many others whom they usually do not list in network surveys, such as the woman who runs the local store and smiles every weekday as she sells the *Times* (Blau & Fingerman, 2009). These acquaintances embed people in society, provide useful services, open up new opportunities, and provide a sense of belonging. The only way to count these people is to do what primatologists have done: following a few people around. Anthropologist Jeremy Boissevain did this in Malta for a year, finding the size of personal networks to be about 1,000 (Boissevain, 1974).

Second, the authors argue that relationships are simply structured as a series of layers – really concentric circles – of support, sympathy, affinity, and activity that scale relative to each other by a factor of three. They call the first three ‘groups’.

Yet, personal networks are not tiered layer cakes. While researchers (such as our NetLab) have collected data using a concentric circle analogy, we found that in reality, relationships are not neatly tiered (Hogan, Carrasco, & Wellman, 2007). The reality is not as simple as the closest layer providing support while the next closest layer only provides sympathy. Different types of very close relationships provide different kinds of support, while some do not provide any support at all. Sisters provide emotional support while mothers-in-law provide financial support. Appreciable support comes from some of the outer layers. We have consistently found multiple ways that lead people to consider network members to be socially close: emotional support, kinship, and frequent contact come into play (Chua, Madej, & Wellman, 2011; Godbout, Kennedy, Wellman, & Zhang, 2011).

Third, the layers the authors identify are not only internally heterogeneous but are artificial constructs. Personal networks do not consist of neatly arranged, disconnected sets of ties. Rather, clusters of relationships span layers: friends and relatives that range from very close to acquaintances often link with each other. Nor are the clusters moated groups: they are interconnected so that information and communication often flows among them (DiPrete, Gelman, McCormack, Teitler, & Zhang, 2011). This was true before the internet, and it is more likely to be true now, with cc:, Facebook networks, listservs, et al. interconnecting clusters.

We have come too far from Darwin to DNA to dispute that humans are much different than chimpanzees. But it is also clear that human societies are different than primate bands: larger in size, diversity, spatial range, clustering, fragmentation, and links between clusters.

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