

Winter 2013

Lessons from a Sequoia Grove

by

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My wife and I visited Yosemite National Park in November. A highlight was the abundance of majestic Sequoia trees, especially the Mariposa Grove of Giant Sequoias. This grove (as well as other stands) dwarfs visitors with its enormous, ramrod-straight tree trunks, many being dozens of feet in diameter. The trees shoot 200 feet to the sky. Light squeezes in between these noble giants onto their comforting cinnamon-colored bark. Awe is the most common response.

These Sequoias have flourished and endured here for centuries, many for millennia. The Park Service has mounted a cross-section from a downed tree with a display legend that notes that this tree's rings can account for weather patterns dating back through the Middle Ages. I photographed my wife standing before an uprooted tree, lying on its side, its exposed roots extending about 20 feet above her head. Later in our lodge, I found a historic book that showed the same tree photographed in the 1880s with a troop of U.S. Cavalry beside and atop it; it had fallen centuries ago and still resisted decay.

It is common for these trees to grow in clusters. Our favorite was The Bachelor and Three Graces, a group of four whose roots are so interlaced that all might fall if one were to. This is the lesson for me.

These Sequoias rise above peril; their bark is so thick as to be almost impervious to insects, fire, and infestation. But their roots are surprisingly shallow. Miniscule, given the trees' tremendous size. They thrive and endure because they intertwine their roots. They overcome the vulnerability that shallow roots present by connecting with each other, becoming a community.

Community, especially a sense of belonging to a community, has important implications for many things, from crime prevention to maintaining housing values, from watching out for neighbors to participating in activities with others. Not feeling part of a community can mean feeling separate and isolated.

A six-year study of older adults, published in the *Journal of the American Medical Association* in 2012, has identified loneliness as a predictor of declines in health and accelerated death. The authors describe loneliness as "the subjective feeling of isolation, not belonging, or lacking companionship." Loneliness has long been associated with feelings of distress, but the study's authors (Carla M. Perissinotto, MD, MHS, Irena Stijacic Cenzer, MA, and Kenneth E. Covinsky, MD, MPH) found that its impact on older adults is especially troubling. They conducted a prospective longitudinal study of 1,604 older adults (average age of 71 years) participating in the Health and Retirement Study, with repeated measures from 2002-2008.

Their instrument of measurement was surprisingly simple: a three-question questionnaire that measures components of loneliness, i.e., whether subjects feel: left out, isolated, or a lack of companionship. Their three-item questionnaire was adapted from the Revised UCLA Loneliness Scale (R-UCLA), and both have been validated and are able to be self-administered. For each component of loneliness, subjects were asked if they feel that way a) hardly ever (or never), b) some of the time, or c) often. The researchers then classified subjects as “lonely” if they responded “some of the time” or “often” to any of the three components, and “not lonely” if they responded “hardly ever (or never)” to all three components.

They then compared lonely and not lonely participants on four measures of functional decline across the period of six years: 1) Activities of Daily Living (ADL) function: participants were asked if they had difficulty in any of five ADL (bathing, dressing, transferring, toileting, and eating). A decline in ADL function was defined as difficulty in more ADL in 2008 than in 2002. 2) Difficulty in upper extremity tasks: participants were asked whether they had difficulty extending their arms above their shoulders, pushing or pulling large objects, or lifting or carrying weights heavier than 10 pounds. A decline was defined as difficulty in more tasks in 2008 than in 2002. 3) Decline in mobility: participants were asked about difficulty with four tasks (running or jogging a mile, walking several blocks, or walking one block). A decline was defined as a decrease in the distance able to jog or walk between 2002-2008. 4) Difficulty in stair climbing: participants were asked whether they had difficulty climbing several flights of stairs, or one flight of stairs. A decline was defined as a decrease in the number of flights of stairs one was able to climb between 2002-2008.

Of the 1,604 participants, over 43% reported feeling lonely, i.e., reporting one of the loneliness components at least some of the time. In the three-item loneliness questionnaire, 32% reported lacking companionship, 25% reported feeling left out, and 18% reported feeling isolated at least some of the time.

Loneliness was associated with all outcome measures. Lonely participants declined faster than their not lonely counterparts. Lonely subjects were more likely to experience decline in ADL (24.8% vs. 12.5%; adjusted risk ratio [RR] of 1.59); develop difficulties with upper extremity tasks (41.5% vs. 28.3%; adjusted RR of 1.28); experience decline in mobility (38.1% vs. 29.4%; adjusted RR of 1.18); or experience difficulty in climbing (40.8% vs. 27.9%; adjusted RR of 1.31).

Most importantly, loneliness was associated with increased risk of death over the six-year period (22.8% vs. 14.2%; hazard ratio [HR] of 1.45). The researchers found that this association between loneliness and death remained significant even after adjusting for demographics, SES, depression, and other health and functional measures.

How is it that some feel lonely in the midst of others? I have written before about "assisted autonomy," which is my modification, or rather, my qualification of the blessed value of autonomy. Being autonomous requires having choices and being able to exercise or realize those choices. The principle of autonomy too often unthinkingly translates to independence, the

enshrined deity of the American way. Independence, freedom to do one's own thing, sometimes translates in practice into benign neglect when applied to someone in need. "Leave him alone."

True independence as part of the social fabric is self-contradictory; each of us is interdependent from birth, relying on others for our nurturance, education, and satisfaction of needs from affection to income (for example, even the most hermit-like technology genius starts with information from others and must ultimately transfer ideas to others). The person living off the land in total isolation is exceedingly rare.

We are assisted by others to become autonomous, having choices we perceive as meaningful and the possibilities of achieving them. Autonomy is a product of an interdependent process. "Autonomous" comes from the Greek, meaning "ruling over oneself, " and assisted autonomy does not mean taking over the lives of others but helping them to rule, to realize their choices. Philosopher Immanuel Kant posed the "categorical imperative" that one should act as if one respects someone else's autonomy. He equated autonomy with dignity. Assisting others to maintain or regain that dignity is assisted autonomy in practice. It is community.

Like the little roots that support the Giant Sequoias.