

Could it be a big world?

Judith S. Kleinfeld

출처 : http://www.uaf.edu/northern/big_world.html

주요내용 : Stanley S. Milgram의 “small world” 의 근거가 약하다고 반박함

Milgram의 실험 (출처: (http://en.wikipedia.org/wiki/Small_world_phenomenon))

Basic procedure

1. Though the experiment went through several variations, Milgram typically chose individuals in the U.S. cities of [Omaha, Nebraska](#) and [Wichita, Kansas](#) to be the starting points and [Boston, Massachusetts](#) to be the end point of a chain of correspondence. These cities were selected because they represented a great distance in the United States, both socially and geographically. ^[1]
2. Information packets were initially sent to randomly selected individuals in Omaha or Wichita. They included letters, which detailed the study's purpose, and basic information about a target contact person in Boston. It additionally contained a roster on which they could write their own name, as well as business reply cards that were pre-addressed to Harvard.
3. Upon receiving the invitation to participate, the recipient was asked whether he or she personally knew the contact person described in the letter. If so, the person was to forward the letter directly to that person. For the purposes of this study, knowing someone "personally" is defined as knowing them on a first-name basis.
4. In the more likely case that the person did not personally know the target, then the person was to think of a friend or relative they know personally that is more likely to know the target. They were then directed to sign their name on the roster and forward the packet to that person. A postcard was also mailed to the researchers at Harvard so that they could track the chain's progression toward the target.
5. When and if the package eventually reached the contact person in Boston, the researchers could examine the roster to count the number of times it had been forwarded from person to person. Additionally, for packages that never reached the destination, the incoming postcards helped identify the break point in the chain.

Results

Shortly after the experiments began, letters would begin arriving to the targets and the researchers would receive postcards from the respondents. Sometimes the packet would arrive to the target in as few as one or two hops, while some chains were composed of as many as nine or ten links. However, a significant problem was that often people refused to pass the letter forward, and thus the chain never reached its destination. In one case, 232 of the 296 letters never reached the destination.^[2]

However, 64 of the letters eventually did reach the target contact. Among these chains, the [average path length](#) fell around 5.5 or six. Hence, the researchers concluded that people in the United States are separated by about six people on average. And, although Milgram himself never used the term [six degrees of separation](#), these findings likely contributed to its widespread acceptance.^[1]

In an experiment where 160 letters were mailed out, 24 reached the target in his Sharon, MA home. Of those 24, 16 were given to the target person by the same person Milgram calls "Mr. Jacobs", a clothing merchant. Of those that reached him at his office, more than half came from two other men.^[3]

The researchers used the postcards to qualitatively examine the types of chains that are created. Generally, the package quickly reached a close geographic proximity, but would circle the target almost randomly until it found the target's inner circle of friends.^[2] This suggests that participants strongly favored geographic characteristics when choosing an appropriate next person in the chain.

- 실제로 많은 수의 편지 (약 70-80%) 가 목적지에 도달하지 못했다.
- 실험 참가자 대상자들, 특히 처음 편지 전달을 의뢰받은 사람들은 보편적인 사람들보다 더 성공확률이 높은 사람들 (발이 넓은)이 많았다.

* Granovetter의 “약한 유대관계의 힘” 에서 약한 유대관계가 사회에서 정보의 전달, 지식의 확산, 기회 포착의 힘이라고 했다. Small world 실험에서 지역적으로 서로 떨어진 곳에 위치한 서로 알지 못하는 사람간에 정보전달이 이루어지려면 몇 개의 weak tie 또는 local bridge를 통해야 하지 않을까? 운 좋게 이런 경로에 닿아서, 이 경로에 있는 사람이 weak tie를 통해 전달을 해 주어야 하는데. Think...