The connected age and the small world problem

Social Networks (Soc 204)
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Princeton University

Matthew J. Salganik

Week 1, Lecture 2
Video 3/3: Small world extension

http://upload.wikimedia.org/wikipedia/commons/f/f5/1967_Ford_Fairlane_Ranchero.jpg

http://commons.wikimedia.org/wiki/File:Computer_in_County_of_Orange_offices,_1967.jpg

FIFTY CENTS

AUGUST 4, 1967

TIME

THE WEEKLY NEWSMAGAZINE

TWELFTH STREET, DETROIT

http://content.time.com/time/covers/0,16641,19670804,00.html
Detroit 12th street riots: more than 40 people died, more than 1,000 injured, and more than 2,000 buildings destroyed

ACQUAINTANCE NETWORKS BETWEEN RACIAL GROUPS:
APPLICATION OF THE SMALL WORLD METHOD [1]

CHARLES KORTE [2]   AND   STANLEY MILGRAM

Harvard University   *The City University of New York*

White "starter" persons in Los Angeles were asked to generate acquaintance chains to white and Negro target persons in New York, using the "small world method." The mean number of intermediaries between starters and target persons was similar to that found in earlier studies, approximately five to six, and this remained constant over differences in race of the target person. The number of completed chains was two and one-half times as great for white targets as for Negro targets. Explanations to account for the results are discussed.

540 white starters in LA

540 white starters in LA

18 targets:

TABLE 1

TARGET DESCRIPTION

Target	Occupation	Age	Income
Negro			
1	Physician	36	$6,400
2	Research technician	26	5,600
3	Policeman	38	8,400
4	Nursing assistant	39	6,000
5	Post office clerk	55	6,300
6	Funeral director	44	10,000
7	Post office clerk	45	6,400
8	Company president	44	25,000
9	Machinist	38	9,000
White			
1	Company director	31	25,000
2	Shipping manager	43	6,000
3	Opera stage director	29	11,500
4	Research technician	41	9,000
5	Bakery manager	51	10,000
6	Youth director	49	9,000
7	Campus policeman	58	4,300
8	Medical techncian	54	6,800
9	Photo offset work	40	6,400

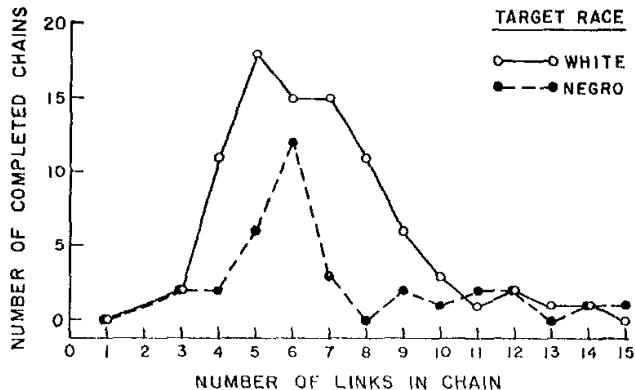Race of target was not explicitly known to participants

Result 1

FIG. 1. Distribution of chain lengths for completed chains.

Mean intermediaries: 5.5 (white targets), 5.9 ("Negro" targets)

Result 2

TABLE 2

COMPLETION VERSUS INCOMPLETION OF CHAINS AS A FUNCTION OF TARGET RACE

Chain success	White target chains		Negro target chains		All chains	
	No. chains	% chains	No. chains	% chains	No. chains	% chains
All chains[a]						
Complete	88	33	35	13	123	22
Incomplete	182	67	235	87	417	78
Starting chains[b]						
Complete	88	39	35	15	123	27
Incomplete	140	61	195	85	335	73

[a] Chi-square analysis of the Target-Race × Chain-Success contingency table for all chains showed a significant association ($x^2 = 29.58$, $df = 1$, $p < .001$).
[b] Excludes chains not begun by initial participants. Chi-square analysis of the Target-Race × Chain-Success contingency table for starting chains only showed a significant association ($x^2 \approx 31.82$, $df = 1$, $p < .001$).

Completion rate: about 30% (white targets), about 10% ("Negro" targets)

Result 3: Gate keepers

TABLE 3

CHARACTERISTICS OF GATEKEEPERS

Characteristic	Complete chains	Incomplete chains	All chains
White senders[a]			
Sex			
Male	86%	78%	81%
Female	14%	22%	19%
Age: mean yr.	44.4	44.3	44.3
Status (head of family)			
Professional	65%	51%	57%
Managerial	6%	28%	19%
Sales, clerical	13%	16%	15%
Service workers	10%	2%	5%
Other	6%	2%	4%
Negro recipients[b]			
Sex			
Male	77%	80%	80%
Female	23%	20%	20%
Age: mean yr.	42.0	43.6	43.3
Status (head of family)			
Professional	55%	61%	60%
Managerial	18%	11%	13%
Sales, clerical	18%	19%	19%
Service workers	9%	6%	6%
Other	—	3%	2%

[a] White participants who send booklets on to Negroes in Negro-target chains.
[b] Negro participants who receive booklets from whites in Negro-target chains.

"Gatekeepers" of white to "Negro" connections were predominately Male professionals
In 23 of the 35 successful cross-group chains, the first "Negro" was the target
Most failed chains (80%) never crossed the racial boundary

- Introduction to the connected age

- ▶ Introduction to the connected age
- ▶ Small world problem shows the scientific arc: idea → formal question → empirical research → critique

Next class: More on the small world problem and some history