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ABSTRACT

This study conceptualizes artists' careers as transitions through positions within a constantly shifting web of relationships that are without a priori hierarchical demarcations. Network analysis of this shifting web from 1981 to 1992 produces three distinct career paths with differential outcomes in terms of the amount of critical notice received by each artist. Those who have had a long history of membership in loosely knit networks receive more critical attention than either artists who have had a long history of membership in tightly knit cliques or those with a history of sporadic connections to the art world. The career ladder is not so much a ladder as it is a sandpile, in which each actor's attempts to reach the top change the shape of the climb.

Network theorists have long argued that the shape of an individual's social network has an impact on differential access to rewards and success (Burt 1992; Granovetter 1974; Howell 1969; Travers & Milgram 1969). Although many of these theorists implicitly notice that networks are constructed and reconstructed and that former network contacts play an important role in present network usage (see especially Granovetter 1974), none has explicitly treated time in networks. Anheier, Gerhards and Romo (1995), for example, produce a compelling network picture of the German writers' world based on ties between authors, but they view the personal networks of these writers as static. That is, each writer has a network configuration that implicitly does not change over time. Likewise, Faulkner (1987), in his insightful study of Hollywood studio musicians, is explicitly concerned with the building of career trajectories, yet he uses network analytic tools in only a secondary way, which does not allow him to analyze the changes in network form over time. This article tests the hypothesis that different network shapes lead to different personal outcomes while explicitly incorporating time into the model. I argue that the shape of an artist's art-world network history influences success -- specifically, that a consistent history of a pattern of broad-ranging weak ties will lead to greater amounts of critical notice than will other types of network shapes, such as dense cliques of overlapping ties. This is especially interesting in the world of fine art, where talent (as opposed to structure) is supposedly driving careers but where network structure nevertheless has an important and profound effect on success.

ART WORLD BACKGROUND

By and large, artists must be connected with galleries in order to sell their work. The artist-gallery connection is crucial; it may also be very unstable. Galleries may have short life spans -- averaging just under a year during the time period of this study, although some galleries lasted considerably longer. Artists become members of a gallery, and the gallery then represents the artist, both in terms of publicity and in the actual handling of sales. An artist may be exclusively represented by one gallery, may be exclusively represented by different galleries within different geographical areas, or may be

represented by several galleries simultaneously (de Coppet & Jones 1984). Galleries may act individually or in concert with other galleries to promote an artist's work (Cox 1982; Guilbaut 1983; Ridgeway 1989). Occasionally (although certainly not necessarily), artists begin as unknowns in a local area. Both Moulin (1987), in her study of the French art market, and Greenfeld (1989), in her study of the Israeli art market, document the movement of successful artists out of provincial areas and into major urban centers -- Paris in the French case, Jerusalem and Tel Aviv in the Israeli case. Of the several urban centers with active art markets in the U.S., New York is the predominant city.

Local success can lead to gallery representation, which leads to an artist's work being viewed by a larger audience in an urban gallery (Greenfeld 1989; Moulin 1987). Continued success may result in the artist's being picked up by larger and more prestigious galleries until she or he achieves national and then international fame. But fame may wane, and in the face of increasing indifference from the public, the artist may be dropped from the gallery and eventually forgotten. This is one possible career path, though one by no means representative of all artists. It is a useful example, however, because it allows us to see a more general career characteristic of artists, namely, that the career posts are defined as relative positions in a structure made up of other artists and galleries. Relative relations between the actors shift over time.

The artist-gallery relation indicates the level of prestige achieved by both the artist and the gallery. Artists, if successful, navigate upward through the ranks of galleries, acquiring a place within the stables of increasingly prestigious galleries. This upward rise may or may not be accompanied by a severing of connections with the less prestigious galleries that offered the artist a foothold in the art world marketplace. Artists compete with others on their level for places in the stratum of galleries just above (in terms of prestige and connection to the major museums) their current position. There is both downward and upward mobility, and the career of the artist may include both types of mobility in differing amounts and in repeated cycles. Prestige for the artist is defined in large part by the status of the gallery to which he or she is tied. Representation by a high-status gallery is often the catalyst for other markers of success, such as notice by critics and acquisitions by prestigious collectors or museums (Bystryn 1978).

Galleries also have careers. In one pattern, a gallery starts by showing the works of relatively unknown artists whose increasing fame brings the gallery into the spotlight and makes it possible for the gallery to acquire representation rights for more lucrative artists. The gallery expands, opening branch offices in other cities or moving to New York. Galleries compete with each other to lure successful or promising artists into their stables (de Coppet & Jones 1984). This competition may be among individual galleries or among groups of galleries acting in concert with each other to foster a particular style or artistic movement. Galleries can increase their own prestige by acquiring high-prestige artists. As a successful gallery moves upward through the ranks of other galleries, it may or may not drop the artists of lesser prestige who were originally responsible for that gallery's success in the market. There are, of course, as with artists, any number of career paths, but these descriptions make clear that the success of each actor -- the artist and the gallery -- depends on its relations with the other. In fact, the success of each is in large part measured by patterned and dynamic relations with the other. Galleries are considered prestigious when they show the work of prestigious artists, and vice versa.(FN1)

We may view artists as workers and gallery positions as jobs, in that the positions

define levels of prestige and income for those that fill them. The art world, therefore, poses an interesting problem in that both the worker and the job are in a state of flux with regard to relative status. The statuses of the artists and the galleries are defined by the relative position of other actors to whom they are tied, both directly and indirectly. Changes in the structure of ties indicate changes in status. Moreover, the changes need not be upward. Artists and galleries may experience downward mobility, both in absolute terms and relative to the movements of others in their world. The changing network structure of other actors in the system, by changing relative rankings, may affect -- for better or worse -- the status of actors whose own pattern of ties has remained stable. Studies in occupational mobility (Rosenbaum 1984) report the deleterious effects on careers of workers remaining in the same position while others in their cohort surpass them. Faulkner (1987) makes this same point with regard to Hollywood composers: "The world is small enough that close friends and even more distant associates can keep track of each other's progress or lack of it. Comparison is inevitable and as the composer watches others move past him on their way to better opportunities, he starts to feel like a failure, not an absolute loser, but a comparative loser" (85).

Artists carry with them in their prestige package a history of past relationships. Their transitions among the galleries representing them effect changes in the structure of ties, which ripple through the art world network on both sides of the artist-gallery picture, not only in space but also in time. Histories of past associations travel with the actors as part of their prestige. A gallery, for example, may gain prestige for having been the first to represent an artist star, even though that star may have left the gallery before achieving high status. Alternative galleries (such as publicly funded galleries, artists' cooperatives, or galleries associated with art schools) often survive by fulfilling this market niche. Market segmentation among levels of artistic prestige exists at any particular moment in time, but the specific actors -- both artists and galleries -- whose patterns of relations delineate that segmentation may shift arenas, dragging with them all the relative repositionings that the transitions entail.

Present-day status is based on a position within a web of ties and also has embedded within it the history of past positions. Faulkner (1987) brings up the conceptual difficulties inherent in approaching careers from this angle: "Conventional indications of career development such as promotion, increases in responsibility, and changes in skill, status, or salary do not apply easily to freelancing. There is no stable hierarchy and therefore no clear line of career progression.... How does one examine such a field?" (48). Rather than conceptualizing careers as the holding of certain jobs that are fixed in terms of the status that they denote, I view art world careers (both for galleries and for artists) as a series of positions occupied within a structure that is itself in a state of flux. Rather than trace a career in terms of an artist's gallery representation, I use the network that those connections provide to view the artist's career as a series of transitions through positions in a larger art world network, which is continuously changing shape. Figure 1 is a graphic representation of this concept. Circles represent artists who are tied together in networks, which change shape over time. The career of an artist (the darkened line) is a trajectory through time and social space. This conceptualization mirrors Bourdieu's (1993) definition of "trajectory," which "describes the series of positions successively occupied by the same [actor] in the successive states of the ... field, being understood that it is only in the structure of the field that the meaning of these successive positions can be

defined" (18, emphasis added). The actor is successively occupying positions within a "field," which Bourdieu (1989) defines as "a network ... of objective relations between positions" (39). The field itself is continuously changing shape over time as actors make and break ties.

This perspective is in contrast to that of Faulkner (1987). Although he recognizes the importance for Hollywood composers of ties to others, there is an implicit hierarchy among those others -- specifically, producers -- based on the budgets of their productions and on the total number of movies that the producer has made. Whereas Faulkner's rich ethnographic data are explicitly concerned with the development of careers, the network data are static: producers have a number of movie credits, as do composers. While Faulkner correlates success with network centrality (in terms of numerous connections to important producers), he does not see centrality itself as a changing and evolving position. The networks do not have histories. The static picture of success and positions does not make full use of the ethnographic data on career evolution, particularly insights on the necessity of strategic tie making and breaking throughout the history of employment. The same criticism holds true for Anheier, Gerhards and Romo (1995).

Discrete time-interval analyses of career moves are also insufficient in evaluating shifting prestige. The import of each move lies not only in the specific transition taking place in that move but also (and more importantly) in the nesting of moves that has defined the actors to that point. Simmel (1971) recognizes individuals as the intersections of social circles. We must expand that picture into the fourth dimension -- time -- in order to understand the components of prestige making. The sequence of career transitions contains embedded within it the past pattern of relations, patterns that denote prestige rankings at different points in time. Specific sequence shapes help account for the success of an artist. Transitions (by artists on one hand and galleries on the other) concatenate into prestige.

There is, of course, an art world hierarchy. Far Fewer artists achieve national prominence than sell their work in "starving artists" sales in fairground pavilions across the country. Critics, especially those writing for national magazines, review only a small number of the artists and gallery shows available. Rickety as it is, this ladder can be climbed. White (1970) recognizes the network component of careers, demonstrating that in order for an individual to make a career move, a whole chain of others must move to open spaces and fill vacancies. Status is even more complicated in that the personal prestige of the occupant of a position enhances the status of the position itself. Certainly many of the professions could be analyzed in this light, so that the career ladder often reveals itself rather as a career sandpile, where each person's footsteps in attempting to get to the top affect the shape of the climb.

Status is affected by both the artist's and the gallery's past patterns of relations and by larger nesting webs of relations through which the effects of one transition ripple in concentric rings of consequence. Changes in relationships by each actor in the interlocking web of affiliations affects the shape of the whole web and, therefore, the prestige of all other actors in the web. These changes are constantly occurring. The fallout of transition for even one artist spreads through the histories of all the artists and galleries. Yet some actors manage to successfully negotiate this world of uncertainty. Network analytic tools can help distinguish the specific types of relationships and histories of relationships that successful artists share. I will use a combination of block

modeling and sequence analysis to plot career trajectories for each of the photographers in this study, showing that the specific network shapes of some actors are associated with specific career outcomes.

DATA

The data set consists of 159 contemporary fine art photographers, the complete enumeration of those photographers who received National Endowment for the Arts photography grants in 1986 and 1988, plus the complete enumeration of photographers who had solo shows at galleries in New York City during 1988. These are the elite of contemporary photographers, having achieved a certain degree of success in order to be included in the data set. Although the boundary between the photography world and the rest of the art world is rapidly decaying, during the 1980s photographers formed something of a distinct population within the larger art world. The relatively small size of the group allowed me to analyze at least the upper stratum in its entirety. By choosing artists from the 1986-88 period, I hope to have avoided the overtly political funding decisions spawned by the NEA reauthorization controversy of 1989. Although some of the photographers in the sample were subsequently affected by the pornography and censorship debates of 1989-90, they had achieved their success prior to that time.

I traced the annual record of gallery memberships of the photographers from 1981 through 1992, using gallery guides, the annual indices of gallery representation compiled by the Association of International Photography Art Dealers and by the journal *Art in America*, and notices and advertisements in the three major art world journals, *ArtForum*, *ArtNews*, and *Art in America*. The resulting yearly artist-by-gallery matrices yield yearly artist-to-artist connectivity matrices with shared gallery representations as the ties. Photographers are tied together in any given year if they share membership in the same gallery or galleries. These are "indirect ties." Although the nodes in these networks may have direct ties with each other (e.g., shared friendship), I am examining only the indirect tie of shared gallery memberships. The idea, from Breiger's (1974) seminal article (itself indebted to the theories of Simmel), is that shared group memberships are an important component in social life. Just as groups are composed of their members, actors are socially composed of the groups to which they belong, that is, of the social circles of which they are a part and that have their intersection in that particular individual (or set of individuals). The work done on corporate interlocking directories (e.g., Useem 1978) is based on precisely these ideas -- corporations are indirectly tied together when their boards of directors share members. Individuals are tied together when they sit on the same boards.

For each of the 12 years under review, the cumulation of individual ties between the artists produces a picture of the total web of relations that year, with each web having a distinctive shape incorporating different types of positions (e.g., Figure 2). There is, of course, some bottom truncation in this picture as a result of the criteria used to define the population. Photographers, for example, may have ties to others who participated in group shows but did not have solo shows of their own that would have made them eligible for inclusion in the study population.

The problem in analyzing artists' success is twofold: first, to retain the fluidity of the status hierarchy once specific artists are tied to specific galleries and, second, to incorporate long histories of those relationships into the analysis.

METHODOLOGY

Network analysis is particularly helpful in analyzing this type of system in that the network tools are designed to incorporate whole webs of relationships rather than discrete dyadic connections. Block modeling, which I will use to define each photographer's position in the art world network, groups actors together who share similar positions with regard to the totality of positions in the network. When the shape of the network changes as actors make and break ties with each other, block modeling allows us to reevaluate the entire web of relations and to regroup actors who share similar positions in the new web regardless of whether they themselves have changed tie configurations.

Block models are constructed by looking at a matrix of ties between actors (Arabie, Boorman & Levitt 1978), such as the one produced by looking at the shared gallery memberships between photographers. By reshuffling the rows and columns of the matrix so as to group together actors who share similar patterns of ties (either the presence of ties to the same actors or the absence of them), block model algorithms produce groups of actors, "blocks," that are more or less structurally equivalent. Structural equivalence is defined as having exactly the same ties to exactly the same actors (Sailer 1979). Because real world networks are complex and seldom achieve the conceptual exactitude of this definition, the blocks produced can be of varying degrees of precision. That is, the block model can be made up of two big blocks whose members are more equivalent to each other than they are to those in the other group. Each of these blocks, however, may be repeatedly subdivided, drawing increasingly fine distinctions between the actors in terms of the degree of equivalence of their ties. The decision of when to stop cutting is based on the degree of exact structural equivalence desired. I used CONCOR in UCINET to cut the yearly matrices into blocks of structurally equivalent actors.

The initial partitions for every year produced two distinct types of blocks. The first block was comprised of small, dense cliques that were usually relatively isolated from the larger network. On occasion, however, there were ties between two cliques of a density that exceeded the average density of the network as a whole. The second block was made up of large, loosely knit groups with low densities and weak ties, both internal to the group and bridging groups.(FN2) For most years, there was only one large, loosely knit group and numerous small cliques. However, for two of the years, 1986 and 1988, it was possible to partition the large group into two smaller, somewhat separate groups of approximately equal size. For the other 10 years, attempts to further partition the large group yielded only small pockets of structurally equivalent actors within the larger group. Using structural rather than regular equivalence allows these cliquelike pockets to appear.(FN3) The conceptual schematic picture that emerges, then, looks like the representation in Figure 2. This picture can be broken down into six types of positions:

(1) Membership in a large, loosely knit group when only one such group exists for any given year (A blocks). These blocks are characterized by numerous weak ties between its members and others in the art world.

(2) Membership in the smaller of two large groups when two such groups exist for any given year (B blocks). Membership in the larger of the two groups is still considered A-block membership.

(3) Membership in a structurally equivalent pocket within the large group (C blocks).

(4) Membership in a dense clique that has a higher than average connection with another block (D blocks).

(5) Membership in a dense clique that is relatively isolated from the larger structure (E

blocks). D and E blocks are characterized by strong ties among their members.

(6) Lack of gallery representation for any given year, meaning no ties with any other artist (X blocks).

Among the first five of these, it is clear that A and B blocks are very similar in terms of structure and that D and E blocks are also similar to each other. A and B blocks have weak ties and low densities. D and E blocks have strong ties and high densities. The structure of A and B blocks is most different from that of D and E blocks, and C blocks fall in between. X blocks are comprised of artists who either have not yet begun to participate in the gallery world or who have dropped out for a time after initially finding gallery representation. Later in the analysis I will distinguish between these two types of nonparticipation. X blocks are similar to Anheier, Gerhards, and Romo's (1995) omega blocks, which are made up of writers who were virtually inactive, with very few sent or received ties to other writers. (Anheier, Gerhards and Romo, however, view this state as permanent, whereas the photographers in the present study's population can and do move in and out of X blocks over the course of their careers.)

Each artist, then, has a block membership for each year. Figure 3 shows the block memberships for 1981-92 of three of the artists in the study. The block models define positionally distinct groups of actors and type them with regard to the nature of the block they occupy, incorporating also the larger structural picture of available types of blocks.

In addition to the block models, a method to analyze the sequences of positions is needed. This method must group actors together not only on the basis of positional equivalence at any one point in time, as do the block models, but also on the basis of a pattern of positional equivalence over the course of time.

Looking at the network picture at only one point in time is inadequate for analyzing histories, in that histories by their very nature require at least two points in time. And it is only in the history of career types that success emerges. The prestige of the artists is measured by the prestige of the galleries to which they are tied over time. Likewise, the prestige of the galleries is determined by the prestige of the artists to whom they are tied over time. The fluidity of the system, however, is anchored by sources of external validation -- notice by critics, in the case of this study. The eventual outcome of certain types of careers with regard to this external validation tells us which career paths have been most successful. While the block modeling produced strings of block memberships, it is necessary to group these individual histories into ideal types of careers, which may then be classed according to success in outcomes.

Optimal matching involves comparing any two strings of events and coming up with a measure of their degree of difference from each other (Abbott & Hrycak 1990). This measure is expressed as the cost of transforming one sequence of events into the other. There are three basic types of operations: (1) transforming one event in the sequence into another, (2) inserting or deleting blank spaces in the chain, and (3) transforming blank spaces into events or events into blank spaces. Each operation has a cost associated with it. The more costs accrue, the more dissimilar the strings of events. I determined the costs for my particular cases based on the degree of similarity between the different types of blocks. The strings are block memberships for each of the 12 years of the study. Figure 4 shows the matrix of costs for this study.(FN4) The letters identify types of blocks produced from the structural equivalence algorithm, ranging from A to E. X indicates that the photographer did not have gallery representation in a given year. Z indicates those

years before the photographer had begun her or his career. There is a cost of zero for transforming an event in one chain to an event exactly like itself in the other chain.

Using the cost matrix to compute the cheapest way to transform one chain of block memberships into another, we can compare the degree of dissimilarity between any two sequences to that between all the other possible pairs of strings. The output of this procedure, when performed on all possible pairs of artists, is a matrix of distances between all the actors. For example, two artists who had exactly the same sequence of block memberships would have a distance of zero between them. Sequences with more differences between them would have higher scores -- up to a possible maximum of 36 for the most widely divergent sequences. Each pair of photographers now has a measure, expressed as a number, of their distance from each other in the social space of career histories. This is the space that was graphically depicted in Figure 1.

I used the hierarchical clustering algorithm in UCINET to group the matrix of optimal matching distances into career types. Three ideal types of careers appeared. Artists in cluster 1 are characterized by long, unbroken careers involving mostly D- and E-block memberships, the blocks densest of all those available. These photographers have consistent career histories of inhabiting strong, tightly knit, dense groups. They spend their careers in worlds relatively isolated from others in the larger art world. These groups are nevertheless long lived, stable, and economically viable, as evidenced by the constancy of the photographers' artistic output and by the unbroken nature of their gallery participation. They are like members of "invisible colleges." (FN5) In contrast, artists in cluster 2, whose careers involve inclusion in the X-block category together with a variety of other blocks, frequently drop in and out of the gallery world. Whereas the photographers in cluster 1 are characterized by constancy within small subcultural niches, those in cluster 2 are characterized by an inconsistent and unstable relationship with the whole gallery system. They appear to be unable or unwilling to find a foothold that can sustain them over any length of time. They are "strugglers."

Photographers in cluster 3 have long, unbroken careers involving almost entirely A-block memberships. Remember that A block is the least dense of all the blocks. Like the photographers in cluster 1, those in cluster 3 have consistent careers. But whereas those in cluster 1 inhabit small, dense, isolated cliques, the photographers in cluster 3 have shaped their network contacts so as to continuously be part of large, sparse networks with numerous weak ties and many structural holes. In the unstable and fluctuating gallery world, these artists continuously make and break ties with other specific actors. In doing so, however, they create a stable and long-lasting structure for their own networks. They are "stars."

CORRELATION WITH CRITICAL NOTICE

Measuring artists' success in monetary terms is difficult owing to a lack of information and to secrecy about data such as prices and collectors' purchases. Using museum representation is difficult because museums cannot always make the purchases they would like to as a result of economic constraints. However, critical notice, another valid measure of success, is a matter of public record. Critical notice was correlated with the network types of the photographers. My measure is a count of the number of reviews for each photographer that appeared in two major art world journals, ArtNews and Art in America, from 1981 to 1992.

Table 1 gives the mean number of reviews for the members of each cluster, and Figure

5 breaks into five categories the total number of reviews the photographers in each cluster received during the 1981-92 period. The photographers in cluster 3 received by far the greatest amount of critical attention, much more than the photographers in either cluster 1 or cluster 2. In many ways those in cluster 1 -- the "invisible collegians" -- form the economic backbone of the photography world. They are reliable sellers, reliable producers. The galleries representing these photographers tend to be very long lived, mainly owing to the consistent income that the photographers provide and to their great loyalty to their galleries. Most of the photographers in this cluster remained with the same gallery or couple of galleries for the entire run of the study period. Yet their work garners little critical attention. Even so, they received more than three times the number of reviews as the photographers in cluster 2 -- the "strugglers" -- whose careers are neither as stable nor as long lived as the photographers in the other clusters.

Photographers in cluster 3 -- the "stars," those with long careers of inhabiting the sparsest networks -- received by far the most attention, four times the number of reviews as those in cluster 1 and more than 12 times as many as those in cluster 2. Cluster 3 also includes the fewest number of photographers receiving no reviews as well as the largest number receiving many reviews, topping out with Cindy Sherman, who had 22 reviews over the course of the 12 years.

There are two structural possibilities that immediately suggest themselves as explanations for the success of the photographers in cluster 3. The first has to do with structural holes (Burt 1992), the second with weak ties (Granovetter 1973). Structural holes are formed by the absence of ties between actors in a network. Actors who are surrounded by structural holes may be in a position to act as a "middleman" between others in the network. Those in this type of position may be able to use their power to their own advantage (Bienenstock & Bonacich 1993). The argument that structural holes allow certain actors to bargain for goods within the network leaves open the question of what these goods might be. Critical notice is certainly one possibility. I used the Freeman Betweenness Measure to compute centrality scores for each photographer for each year of the study. Within the context of the entire network configuration, this is a measure of the total number of shortest pathways between all pairs of actors that pass through another actor. The average score for photographers in cluster 3 over the entire course of the study period was 4,559.996, as compared to 2,630.759 for those in cluster 1 and 822.245 for those in cluster 2. Any information that passes between members of the art world is almost twice as likely to pass through an artist in cluster 3 as through one in cluster 1 and more than five times as likely as through one in cluster 2.

According to the weak ties argument, a photographer with weak ties to several different small worlds within the art market should be able to sever a connection to any particular gallery without affecting the great majority of his or her ties. By diversifying their contacts with weak ties throughout the art world, the photographers in cluster 3 are also in a perfect position to remain unharmed by the numerous gallery closings that characterized the 1980s art market. This outcome supports much other social network research. Howell's (1969) successful finders of abortions and Granovetter's (1974) successful finders of jobs, for example, exhibit similar network configurations.

CONCLUSION

Career ladders in the art world are not so much ladders as they are sandpiles. The movement of actors within the field changes the shape of the field. Movements affect not

only the status of people directly tied to the vacancy chain created by one job change but also the entire network of indirectly tied actors whose status is a function of their position within the totality of the network. This is true both in social space and across time. Histories of past associations continue to reverberate in actors' present-day status. When discussing status, the chain of effects that White (1970) modeled is more appropriately viewed as a web of effects that is continuously being reordered through time.

By looking at artists' careers as sequences of network positions defined by relationships with galleries rather than as sequences of statuses defined a priori by judgments about gallery rankings and by incorporating optimal matching in order to retain histories within the analysis, I find that the most prominent artists are those whose careers involve consistent membership in blocks characterized by broad-ranging weak ties and numerous structural holes. Within the context of uncertainty and flux related to the actual status of an actor's connections in the art world, there nevertheless emerges a stable overall structure. Even though both artists and galleries continually make and break ties with each other and even though the relative rankings of specific actors may change, the artists who achieve fame manage to structure their particular ties so as to continuously remain in strategic positions within the overall structure. Artists who retain ties to a specific subcultural clique often build long-lasting relationships with other specific actors that appear to limit their access to larger fame.

The method of analysis employed in this study may be generalized from the art world to any area where individuals move among different organizations and can affect the status of an organization by their membership. Lawyers moving between firms, professors moving between universities, even pro athletes moving between teams can all be seen in this way. The shift is from an internal labor market view of a career ladder to what might be called a "network labor market"(FN6) view.

The same method of analysis can also be used to explore the success of organizations. Whereas this article examines the structures conducive to success for individual artists, the method could easily be used to analyze the galleries -- or to analyze firms, universities, teams, and the like. The key is to see social actors within a web of shifting relations and to map those relations over time.

The view here is inherently Bourdieuan, seeing the artistic field as a network configuration that is continuously changing shape as actors reposition themselves relative to each other. Each career can be evaluated only in relationship to other actors. This type of analysis provides a practical method by which to explore projects driven by Bourdieu's theories of fields and trajectories as network analytical concepts.

ADDED MATERIAL

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FIGURE 3: Photographers' Block Memberships

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Jim Dow (Cluster 1)	E	E	E	E	E	E	C	C	C	C	E	C

Shelby Lee Adams (Cluster 2)
 Z A A X X X X B X X E E
 Robert Mapplethorpe (Cluster 3)
 C C A A A A A A A A A C

FIGURE 4: Transformation Cost Matrix

	A	B	C	D	E	X	Z
A	0	1	1	2	2	3	1
B	1	0	1	2	2	3	1
C	1	1	0	2	2	3	1
D	2	2	2	0	1	3	1
E	2	2	2	1	0	3	1
X	3	3	3	3	3	0	0
Z	1	1	1	1	1	0	0

TABLE 1: Mean Number of Reviews by Cluster

Cluster	Mean Number of Reviews
1	.84
2	.25
3	3.23

F = 20.311
 Significance = .000
 df = 158

FIGURE 1: Career History as Network Positions

FIGURE 2: Art World Network Structure

FIGURE 5: Total Reviews by Cluster

FOOTNOTES

1. This discussion has left aside the issue of whether working in a particular style at a particular time affects an artist's success. A forthcoming paper will analyze this problem in detail and will show that there is no connection between particular styles and rates of success, as deduced from reviewers' characterizations of artists' styles from the 1981-92 reviews in Art in America and ArtNews. For more details, see Giuffre 1998.
2. Because the artists could have numerous ties to each other through multiple gallery-shared gallery memberships, tie strength is operationalized as the number of ties between nodes, with one shared membership being a weak tie and two or more shared memberships being a strong tie.
3. While structural equivalence is defined as having exactly the same ties to exactly the same actors, regular equivalence groups together actors who have the same types of ties to the same types of actors. For example, leaders of cliques are likely to be grouped together in regular equivalence, whereas the cliques themselves are more likely to be preserved in structural equivalence.
4. When two photographers had the same type of block membership in a given year (e.g., both were part of a D block), there is a cost of zero to transform one into the other. Because the structures of A and B blocks are so similar to each other with regard to density, the cost of transforming an A into a B, or vice versa, is minimal. The same is true for D and E blocks. Because A and B blocks are most dissimilar from D and E blocks, the

costs are highest to make transformations between these blocks. C blocks incorporate some structural elements of both ends of the continuum; costs therefore fall in between. The numbers used for the costs are really ratios of similarity based on the overall structure of the blocks.

5. I am indebted to an anonymous reviewer for suggesting the terms "invisible colleges," "strugglers," and "stars" to describe the various groups of photographers.

6. Once again, I am indebted to an anonymous reviewer for suggesting this term.

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