

Half the Right People: Network Density and Creativity

By Katherine Giuffre

Abstract

Social scientists investigating the attributes associated with creativity have for the most part confined their research to the study only of creative people. This research attempts to compare creativity with non-creativity by comparing creative with non-creative periods in the lives of three famously isolated creators (Emily Dickinson, Paul Gauguin, and Charlotte Brontë) to argue that the social networks of the individuals are different during creative periods than during non-creative periods. By using the correspondence of each of the artists to construct social networks, it is possible to analyze the artist's relationships with regard to density and betweenness and to compare those across creative and non-creative time periods. The average network density of the first order zone network around each of the artists was 0.475 during periods of creativity. There was no correlation with a particular betweenness score.

Keywords: Creativity, social networks, density, Emily Dickinson, Paul Gauguin, Charlotte Bronte

Introduction

In the social sciences, there have been three main conceptions of creativity – as an attribute, as an action, and as an outcome. In the first conception, creativity is a component of individual psyches, much like IQ, which may be affected by social factors, a product of some combination of nature and nurture, but which is nevertheless an attribute of the individual and which varies from person to person. This way of conceptualizing creativity is largely pursued by psychologists, who have looked to the individual psyche as the place from which creativity flows (e.g. Albert 1990; Csikszentmihaly 1996; Gedo 1990; Sandblom 1999.) A large part of this approach has been to try to determine which personality characteristics are necessary for the individual to be a creative person.

In the second conception, creativity is an action. The bricoleur, for example, makes innovative use of the materials at hand in reaction to unexpected circumstances in order to respond to the world in creative ways (Levi-Strauss 1966). This perspective falls along the lines of Liep's definition of "creativity as activity that produces something new through the recombination and transformation of existing cultural practices and forms" (2001: 2). Social scientists working with this conception of creativity often argue that it is social structure, rather than individual psyche, that plays the most important role in fostering creativity. Borofsky (2001) argues that creativity is a response to the unexpected occurrences, the disruptions, the challenges to tradition, habit, and routine that emerge to unsettle us. Creators are those who respond to these unexpected occurrences with unexpected solutions. These solutions may be at variance to traditional norms. They may even be highly antagonistic to those understood and agreed upon precepts. Indeed, they probably are. Creators break social rules.

In the third conception, creativity is an outcome, a change in the social or cultural formations, understandings, conventions, relations, etc., that had previously existed. One way of expressing this is that creativity is the stretching of the boundaries of the discursive formation (as in Foucault 1972). Something, an act or an object perhaps, is recognized as creative to the extent that it realigns relations or understandings. For example, White (1993) writes that, "Artworks can be so charged with importance because in expressing various identities, artworks may also be announcing ways in which identities are subject to reshaping and manipulation." (1993: 9) As another example of this conception, subversive strategies in the field (Bourdieu 1985) are creative when they re-order the relations of the actors.

All of these conceptions rely to a greater or lesser extent on social relations and social forces, whether as part of the "nurture" aspect of the development of the individual psyche, the social structure and support that facilitates deviant actions that are creative, or the social reception that recognizes and legitimates the creative outcomes. This paper explores one particular type of social relation – the in-

dividual social networks of the creative person – to look at the correlates with creativity. As such, it extends the thinking of creativity as an individual psychological attribute to ask about creativity as a social attribute of individuals. Specifically, what is the connection between social networks and creativity?

Previous Literature

In his study of highly successful creative people in many fields, Csikszentmihalyi (1996) has attempted to catalogue the psychological attributes that these people possess, looking for patterns. He (1996: 10) finds, as an example of the characteristics that separate the creative individual from others, that “In fact, creative people are neither single-minded, specialized, nor selfish. Indeed, they seem to be the opposite: they love to make connections with adjacent areas of knowledge. They tend to be – in principle – caring and sensitive.” One important difficulty of this work is that by excluding “non-creative” people from his study, Csikszentmihalyi undermines his ability to argue that the attributes he finds among creative people are different from those of non-creative people. With regard to specific attributes, moreover, Ng (2001), in his study of 344 university students in Singapore and Australia found, as his title states so succinctly, that “Creators are dogmatic people, 'nice' people are not creative, and creative people are not 'nice’”. Albert (1990: 23) takes a third tack and argues that “The eminent seem to protect themselves from distractions and intrusions that social and work involvement, and, for many, intimacy, may bring into their life work by psychologically *distanting* themselves.” [emphasis in the original] Although in disagreement with each other about the specifics, each of these studies seems to indicate that social relations with others may be in some way correlated with creativity.

Amabile (1996) documents the impact of social and environmental influences on creativity, emphasizing the importance of social-psychological factors present during childhood, such as family structure (especially the role that birth order might play) and educational environments. However, especially pertinent for this paper is her discussion of Simonton’s work: “Although several social factors during the creator’s developmental period (childhood, adolescence and early adulthood) influence later creativity, virtually no social factors during the actual productive period have an impact.” (Amabile 1996: 217) This paper will argue that social factors during the productive period do have an effect on the creator.

Using what he calls the “ecosystem perspective”, Harrington addresses the role of social forces in the development of creativity by imagining those external variables which might prevent a person from being able to write a book and therefore be considered “creative”:

What might the story of our missing writer include? It might well be a story of talents never recognized, of books never read, of mentorships never crystallized, of older writers never known, of travels never possible, of energies drained, of others to

care for, of mouths to feed, of rents to pay, of rooms to share, of silences, and of invisible men. It might well be a story of ecosystem failure. (1990: 151)

By the term “ecosystem”, Harrington seems to be referring to society, social relations and social forces.

The idea of “kaleidoscope thinking” as put forward by McLeod et al. (1996), is also interestingly social. McLeod et al. argue that persons who are socially positioned to take advantage of differing viewpoints, differing subcultures, differing norms, and differing expectations and ways of thinking, are more likely to be creative. In more sociological terms, these people might be characterized as those with numerous bridge ties among different small worlds (Granovetter 1973; Uzzi & Spiro 2005) or those in brokerage positions surrounded by structural holes (Burt 1992, 2004). Nemeth and Nemeth-Brown (2003), Milliken et al. (2003) and Strasser and Birchmeier (2003) all similarly argue for the value of dissent and diversity as stimulators for creative thought in group settings, especially because diversity acts as a preventative to “groupthink”. Again, the idea is that it is the pattern of relations with others that is critical for fostering creativity.

Other researchers (e.g. Dennis 1966; Simonton 1988, 1991, 2007; Over 1989) have taken a life course approach to creativity. In looking at academics, scientists, and those in various fields in the arts, Dennis (1966: 3) finds that “[f]or almost all groups, the period [age] 40–49 was either the most productive decade or else its record was only slightly below that of the peak decade.” In later work, Simonton (2007) finds that the timing of the productive peak varies somewhat with the particular field (poets earlier than novelists, for example), but notes that a finding from the life course literature is “especially robust”:

...the output of creative products tends to change over time, rising relatively quickly to a career maximum and then declining somewhat gradually thereafter. Typically, the peak occurs sometime in the late 30s or early 40s, and the productivity toward the end of the career is about half that at the career maximum. (2007: 133)

Simonton also argues for a “constant-probability-of-success model” (1988) where “creativity is a probabilistic consequence of productivity, a relationship that holds both within and across careers” (1988: 254). “Success” here is defined as “high-quality” work, such as scholarly articles which are cited very frequently by other authors. Productivity, therefore, might be reasonably used as a proxy for creativity.

Further, Galenson and Weinberg (2000) find that there has been a shift in the creators’ average peak age of creativity over time, with painters born later in the 20th century (between 1921–1940) reaching their creative peak earlier than did painters from the previous generation (born between 1900–1920.) Galenson and Weinberg attribute this to shifts in the demand structure of the mid-century art market – that is, to larger social forces outside of the individual artists.

Similarly, Accominotti (2009) argues that the decrease in peak age of creativity that Galenson observes is linked to participation in artistic movements, the social dynamics of which play an important role in generating artistic creativity. Farrell

(2001), in his work on collaborative circles, argues from specific historical case studies that the social form that fosters creativity is a group of creators that consciously stands in opposition to the mainstream norms, has enough members to support each other in the ideological deviance, is not so tightly-knit as to impel group-think or too loosely-knit to support each other, and where members break sometimes into pairs for purposes of refining and fleshing out ideas. He argues that having the right *type* of social structure is a spur to creativity – that the creative ideas themselves would not arise without the particular interaction with a circle of others. Sawyer (2007) finds that improvising groups are able to attain a state of “group flow”, an extension of Csikszentmihaly’s conception of “flow” for the individual, where members can spontaneously engage in creative action. Not all groups are able to achieve this state, however. Sawyer argues, for example, that groups are most successful when there is a clear goal for the group, but the goal is not so restrictive as to leave no options for creative problem-finding.

Collins (1998), arguing in a similar vein, takes a broader historical view, positing a “law of small numbers” which states that great creativity in philosophy occurs when there are between three and six competing philosophical schools extant simultaneously and when the trajectory of these schools of thought is in the process of either contracting (from a large number being winnowed down) or expanding (from a smaller number diversifying). It is these situations, Collins argues, that produce innovative ideas with lasting impact through the ages. It is the interaction among these groups that is so conducive to the production of creative ideas. Innovative ideas and schools of philosophy are the outcomes. Farrell, Collins, and Sawyer all focus on the development of creative groups and the interactions within and among those groups as well as the interactions of the groups with the larger society surrounding them. Simonton (1984) further examines the specific types of relationships (e.g., master-apprentice) that artists have and how those relationships correlate with eminence. By coding the existence or not of 11 different types of relationships in each artist’s life, Simonton finds that five different types of relationships – paragons, rivals, associates, apprentices, and admirers – are correlated with artistic eminence.

This paper extends this thinking to look at the complete (as far as possible) social networks of specific individuals. The literature seems to indicate that we should expect to see creativity flourish when 1.) the individual’s social network is dense enough to be supportive but not so dense as to demand groupthink, 2.) when the individual has ready access to a wide-ranging set of others (including others involved in artistic movements), and 3.) when the individual is the link between disparate small worlds. These are network attributes.

Is there a difference between the social networks of “creative” versus “non-creative” people? The methodological considerations of this problem are a stumbling block. We run up against problems in trying to distinguish creative from non-creative people in order to make the comparison necessary to test our hypothesis. Johnson (2008), for example, looks at networks of people who have re-

ceived patents, by definition innovators. Although he finds that patent holders have fairly dense networks of ties among themselves (based on shared authorships of the patents), this does not tell us much unless we can compare those networks with the networks of *non-creative* people who nevertheless share similar attributes with the patent holders. Since Johnson is looking at biotechnology inventors, we would need to see the networks of collaboration (the data source for which is unclear) among people working in biotechnology who have *not* had innovative ideas. The comparison between the network structures of the two groups would theoretically give us the intellectual traction that we need to make statements about the social structures correlated with creativity, but the problems of defining people who are *not* creative are even more intractable than defining those who are and the network data would necessarily be of a different type, given that the networks for the patent holders are derived from shared authorship of the patents themselves.

Part of the difficulty with conceptualizing a solution to this problem lies in the conception that creative people have “creativity” as a permanent personal attribute. If we instead look at *products* as being creative (ideas that fall outside the boundaries of the established field, say) then we see that over the course of a person’s lifetime, there are some moments of creativity (the production of creative products, ideas, etc.) and other periods where that same person is not as creative, as the life course researchers all document. If we then trace the pattern of social relations over the course of a lifetime, comparing periods of much creative production with periods of no or very little creative production, we have a way of examining the correlation between a person’s social relations and his or her creative output that avoids the pitfalls of trying to find non-creative people who share enough attributes with the creative ones to form a useful contrast. We can define “non-creative” as those periods in a person’s life when, compared to other more fertile periods, his or her creative output is relatively less marked. Creativity, then, is seen here not so much an attribute as it is an action. Moreover, these actions are facilitated by some social structures more than by others. Creativity as an action is correlated, that is, with individual attributes, albeit social rather than psychological ones.

Given the contention that creativity is the product not of lonely recluses locked away in their garrets, but of individuals enmeshed in social structures, the most compelling cases to examine will be those of precisely the loneliest of recluses because they are the cases most unfavorable to the hypothesis. This paper examines the social networks of three famously reclusive creators – Emily Dickinson, Paul Gauguin, and Charlotte Brontë – to argue that periods of major creative production are correlated with a particular density of the surrounding social networks and that periods of little to no creativity are correlated with periods in the artists’ lives of either too much or too little density in their social networks.

Background

Emily Dickinson was born in Amherst, Massachusetts, in 1830 and died there in 1886. (For sources on Dickinson's life, see Habegger 2001 and Sewell 1980.) Along with Walt Whitman, she is considered the very best of 19th century American poets. Her innovative approach to poetic form presaged the rise of Modernism in the early 20th century and profoundly affected generations of American poets who came after her. She is perhaps equally well known, however, for the legend of her withdrawal from society and the decades that she spent secluded in her family's home, hidden from the world writing hundreds of poems in secret, publishing only an anonymous handful during her lifetime. If any artist seems to epitomize the romantic ideal of isolated genius, it is surely Emily Dickinson.

Yet Dickinson was not quite so isolated as legend portrays. She lived in the house with her father and her mother (who died only four years before the poet) and with her sister. Next door lived her brother Austin's family, including his wife, Susan Gilbert Dickinson, Emily's dear friend and poetic collaborator, with whom she had almost daily communication (Smith 1992). Perhaps more importantly, Dickinson kept up an abundant correspondence with friends, relatives, and acquaintances far and wide. She wrote to the whole gamut from her young nieces and nephews next door to luminaries such as sculptor Daniel Chester French, writer Helen Hunt Jackson (both of whom she had known in her teens and twenties), and Josiah Gilbert, founder of *Scribner's Monthly*, who along with his wife, was friendly with the entire Dickinson family. Over 1000 of these letters survive (Dickinson 1958; Sewell 1980; Habegger 2001).

Dickinson probably began writing poetry at a young age and the earliest extant example dates from 1850 when she was 19 years old. Although she wrote throughout her life, the period from 1858 through 1865 was especially productive. (Dickinson 1960) Over half of the poems that she wrote during her lifetime were produced during these eight years, including most of her very finest, such as "Wild Nights – Wild Nights!" (c. 1861), "I heard a Fly buzz – when I died – ..." (c. 1862), and "A narrow Fellow in the Grass" (c. 1865). The years 1858-65 were the high point of her writing and it is during this time that she developed her unique and innovative poetic style. (Dickinson 1961) The earliest publishers of her work felt it necessary, in fact, to edit and amend her idiosyncratic punctuation, capitalization, rhyme schemes, and meter so as to fit her poetry more closely into the expectations of the day. Only decades later was it published as written. An example of a negative review from 1891, however, inadvertently praised her innovative style:

It is a sad pity when the substance of true poetry is put at a disadvantage by the writer's recklessness in respect to form ... Her verses are fragmentary in thought and often clumsy in expression and they pay small heed to rhyme or meter. Yet they are poetry. (Buckingham 1989: 281)

Although in many ways far removed from a quiet New England spinster poet, the painter Paul Gauguin shares some important characteristics with Dickinson: periods of startlingly innovative creativity, long stretches of relative seclusion, and a decided penchant for letter writing (Danielsson 1964; Cachin 1992). Gauguin was born in 1848 in Paris. He married when he was 25 years old and began painting the following year. Within two years, he had shown his first painting in the Salon and three years after that first participated in the annual Impressionist Exhibition, producing rather imitative paintings that fit in well with the prevailing Impressionist aesthetic. In 1883 he finally abandoned his work as a stockbroker to devote himself to painting. His life after this was peripatetic, including stints in Copenhagen (1884-85), Pont Aven (1886), Panama and Martinique (1887), Pont Aven again (1888), the infamous nine weeks with Vincent van Gogh in Arles (1888), Pont Aven a third time and Le Pouldu in Brittany (1889) before leaving for Tahiti in April 1891. He stayed on Tahiti until mid-1893 and then returned to France. He went to Pont Aven for a final stay in 1894 and then left again for Tahiti in 1895. In 1901, he went from Tahiti to the island of Hiva-Oa in the Marquesas. His health declined precipitously in the last years of his life and he died on Hiva-Oa in 1903. During all of these wanderings, Gauguin kept up a steady correspondence with dealers, patrons, friends, fellow artists and even, for many years, with his abandoned wife and family.

Like Dickinson, Gauguin had distinct periods of artistic innovation. The first was the period 1887-89, during which Gauguin stylistically broke with Impressionism and, along with his friends Meyer de Haan, Charles Laval and Emile Bernard, formed new ideas about painting which were the basis for Synthetism and Cloisonnism. In 1888, Gauguin painted the arresting "Vision after the Sermon: Jacob Wrestling the Angel" and also had his first one person show in Paris. In 1889, he painted his startling masterpiece, "The Yellow Christ", which brought together many of the innovative ideas with which Gauguin himself had been wrestling.

The second phase of creativity occurred from June 1891, when he first arrived in Tahiti through mid-1893,¹ during which time Gauguin found his definitive style and subject matter and executed the stunning "Manao tupapau" as well as "Ia Orana Maria", a daring reworking of the theme of the Virgin Mary with the baby Jesus. There was also a smaller burst of creativity in 1896-97, when Gauguin painted the masterpieces "Nevermore" and "Where do we come from? What are we? Where are we going?" However, although these paintings are among Gauguin's finest, they are more a summing up of his life's work rather than truly new and innovative approaches to painting. It is a matter of debate, therefore, whether this period can be classed with the other two. Following this final burst, Gauguin became increasingly entangled in local politics, his own legal and financial woes, and in his declining health. His output diminished considerably before his death.

As with Dickinson and Gauguin, Charlotte Brontë has also been the object of considerable myth-making, especially with regard to the isolation that she shared with her talented siblings. Brontë was born in 1816. (For sources on Brontë's life, see Hanson & Hanson 1949; Barker 1994; Gordon 1994 and Miller 2001.) Raised in relative isolation in the Yorkshire moors, Brontë lived most of her short life at home in the Haworth parsonage with her widowed father and three surviving siblings, her sisters Emily and Anne and her brother Branwell. She received only a smattering of formal education, making her few friends during those times when she was away at school – one year at the Clergy Daughter's School in Lancashire when she was eight and 18 months at Miss Wooler's school in Roe Head, Yorkshire when she was 14. At Miss Wooler's, Charlotte made friends with fellow students Ellen Nussey and Mary Taylor who would be her chief correspondents throughout the rest of her life. Charlotte returned as a teacher three years later, staying from June 1835 until December 1838. That would be the longest that she would ever be away from home.

In February 1842, Charlotte and Emily travelled to Brussels to become students at the school of M. Constantin Heger. She left on January 1, 1844. From then on, her father's increasing blindness and ill health made it difficult for Charlotte to ever leave him.

In 1846, the sisters self-published a book of poetry under the names Currer, Ellis, and Acton Bell. Only two copies sold. Nevertheless, Emily producing *Wuthering Heights* in 1847, Anne producing *Agnes Grey* in 1847 and *The Tenant of Wildfell Hall* in 1848, and Charlotte publishing her masterpiece, *Jane Eyre*, in December 1847. The novel attracted a fair share of disapproval from many critics who failed to grasp the innovative genius of "the New Gothic" (Heilman 1958). As one critic wrote at the time, "It is a very remarkable book: we have no remembrance of another combining such genuine power with such horrid taste." (Rigby 1848/1971: 450) Nevertheless, by January 1848 a second edition of *Jane Eyre* was required and a third edition by mid-April of that same year.

Following the success of *Jane Eyre*, Charlotte Brontë's social world enlarged considerably as she began to visit London occasionally and became friends with others in the literary circles there. But her pleasure in her accomplishments and new acquaintances were overshadowed by the deaths from tuberculosis of all of her remaining siblings: Branwell in September 1848, Emily in December 1848, and Anne in May 1849. For the next several years, Brontë lived at Haworth with her father. She wrote two more novels during this period, *Shirley* in 1848–49 and *Villette* in 1850–53. In June 1854, Brontë married her father's curate, Arthur Bell Nicholls, but she died in March 1855, nine months after her marriage, at age 38.

Methodology

Dickinson's complete extant letters are collected in Dickinson (1958 – three volumes). These are the letters that Dickinson wrote, with only a very few of the

letters that she received included. Almost all of the letters that she had received and kept during her life were burned by her sister after Dickinson's death.² For this analysis, the letters are divided into three periods: 1850 (the date of her first surviving poem) to 1857, 1858 to 1865 (the period of greatest innovation and productivity in her poetry), and 1866 to 1886 (the year of her death). For each period, the letters were used to build a first-order zone network – that is, not only was Dickinson connected to the recipients of the letters, but those recipients were connected to each other if 1.) there are extant letters between the two recipients (these are relatively rare, but do exist), 2.) it could be assumed that the two recipients knew each other (for example, her brother Austin was assumed to know his daughter Martha), 3.) biographies make clear that two recipients knew each other (for example, Austin's long term extra-marital affair with Mabel Loomis Todd is well documented) or 4.) Dickinson mentions one recipient to another within the body of a letter in a way that indicates the two know each other. For example, in a letter to her friend Abiah Root in 1850, she mentions her other friend Abby Wood, indicating that Root knew her, as would be expected from their girlhood days. "Abby has not come home yet – and I hav'nt [sic] written her. She must be very sad, and need all comfort from us. She will be left *alone* – wont [sic] she?" (Dickinson 1958: 89). Owing to Dickinson's frequent mention of having received letters from her recipients, despite the absence of these letters, the ties are considered directionless. These ties, then, form three matrices (one for each period) that represent the immediate network of Dickinson and her correspondents, with Dickinson at the center.

Dickinson's withdrawal began in her twenties and she maintained her previous friendships by letter. Owing to brief trips away from home taken by her family members as well as the preservation of notes and letters sent to her brother's house next door, the letter networks also include even her closest family members. Because of her withdrawal from face-to-face society and her attention to maintaining her relationships through letter writing, the correspondence network provides a very good picture of the social interactions in which Dickinson engaged. We can have a more complete picture of her social network precisely because so little of it happened via personal contact – letters leave traces that conversations do not.

Paul Gauguin's retreat from society was not nearly so complete, of course, and his correspondence network cannot be seen as encompassing his social life to the same extent as Dickinson's can. Nevertheless, his long periods of exile away from Paris and the corresponding necessity for letter writing (to handle his artistic business affairs with dealers, critics, and patrons as well as to maintain his relationships with friends and family far away) mean that his social networks are more fully represented in his letters than would be the case of an artist who was seldom far from the cafes and salons at the center of the art world in Paris (Guerin 1978; Gauguin 1984, 1992, 2003; Denvir 1992; Thomson 2001).

The same methodology was used to construct networks for Gauguin, although in his case, networks were constructed for seven periods: 1872 (the date of his oldest extant letter) to mid-1886³ (when he left for his first trip to Pont Aven in Brittany), mid-1886 through 1889 (the period during which he developed the ideas of Cloisonnism and Synthetism), 1890 to mid-1891 (when he landed in Tahiti for the first time), mid-1891 to mid-1893 (his first Tahitian period), mid-1893 to mid-1895 (when he arrived in Tahiti for the second time), mid-1895 through 1897 (the period when he painted “Nevermore” and “Where do we come from?”), and 1898 to early 1903 (when he died). Gauguin’s letters are not compiled in the way that Dickinson’s have been, so multiple sources were used to amass them (Danielsson 1964; Guerin 1978; Gauguin 1984, 1992, 2003; Cachin 1992; Denvir 1992 and Thomson 2001).

Brontë’s letters, including a fair number of the letters that she received and also many letters between others in her circle, are collected in Smith (2004 – three volumes.) Unlike with Dickinson, whose main correspondent – her sister-in-law Susan Gilbert Dickinson – was also her closest poetic collaborator (Hart & Smith 1998), however, missing from the Brontë correspondence record is the close collaboration with her sisters Emily and Anne. The sisters’ co-residence in the Haworth parsonage during the critical years of 1846-47 obviated the need for any letters, although the importance of the sisters’ communication with each other is undeniable. Brontë wrote to George Smith in 1852 (years after her sisters’ deaths):

You must notify honestly what you think of ‘Villette’ when you have read it. I can hardly tell you how much I hunger to have some opinion besides my own, and how I have sometimes desponded and almost despaired because there was no one to whom to read a line – or of whom to ask a counsel. ‘Jane Eyre’ was not written under such circumstances, nor were two-thirds of ‘Shirley’. (Smith 2004 vol. III: 74)

The other Brontë family members, therefore, have been included in the matrices for Charlotte Brontë up until the time of their deaths. Matrices were constructed otherwise in the same manner as for Dickinson and Gauguin. The time periods for Brontë are: 1829–39 (first extant letter through two stints at Miss Wooler’s school), 1839–44 (two governess jobs and her time in Brussels), 1844–45 (home at Haworth), 1846–47 (from the date she began composing *Jane Eyre* until she finished writing it), 1847–49 (the deaths of her three remaining siblings and the composition of *Shirley*), and 1849–55 (the period of her fame, the slow composition of *Villette*, her marriage, and her death.)

Figure 1 shows the sociogram of the 1872–86 period for Gauguin as a typical example of the correspondence networks created in this way. Nodes in the network have been grouped together by structural equivalence, where actors are structurally equivalent if they have the same types of ties to the same others.

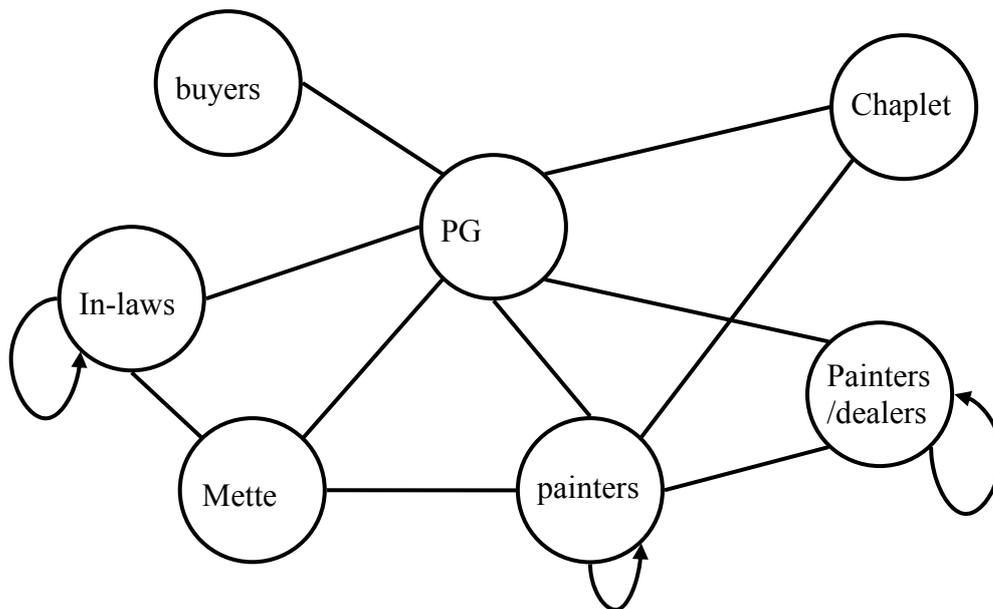


Figure 1: Letter Network, Paul Gauguin, 1872-86

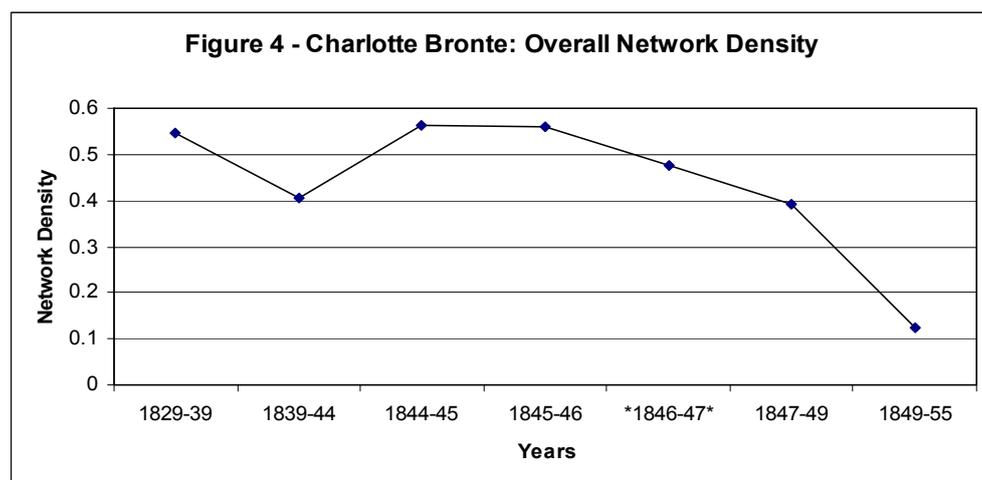
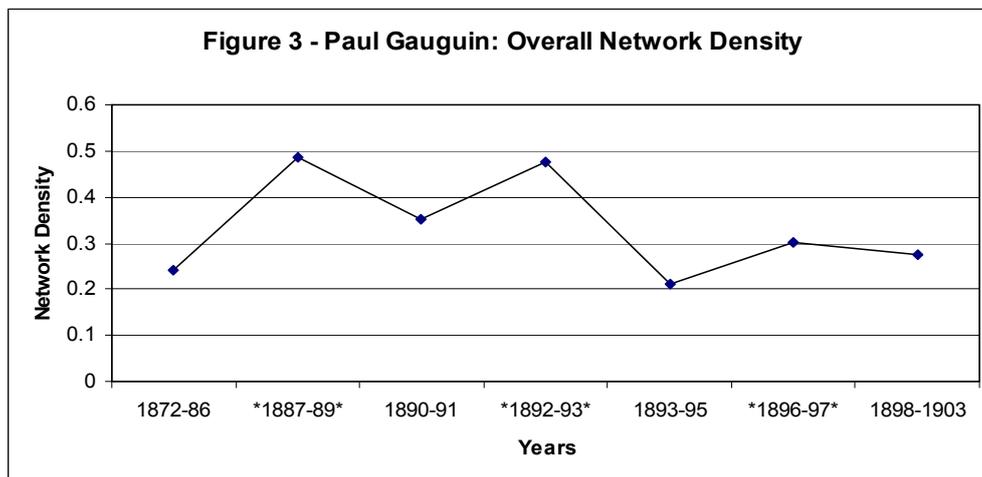
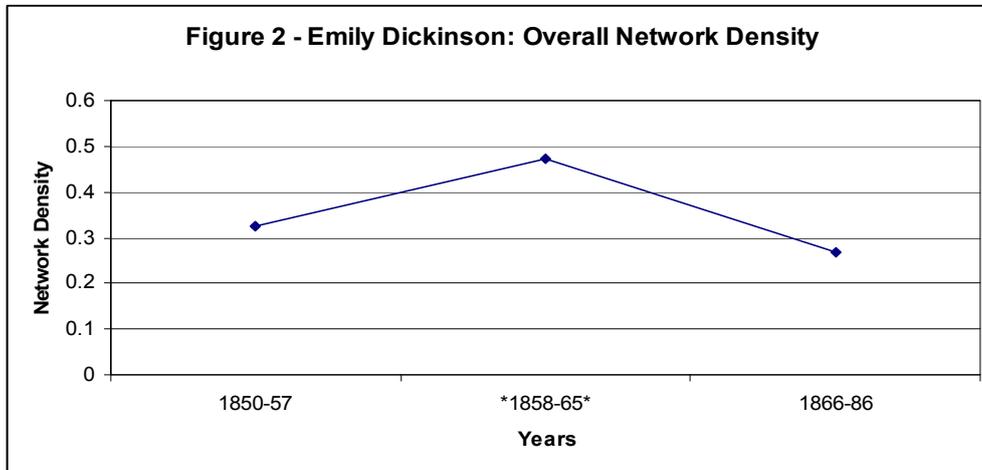
Using UCINET (Borgatti et al. 2002), the matrices of correspondence were analyzed in terms of their overall density, as well as betweenness centrality. Density is the proportion of actual ties made to the number of ties that could possibly have been made in the network. The higher the density score, the higher the proportion of actual to possible ties.

Betweenness centrality is a measure of the number of shortest paths (geodesics) between any two nodes in the network that pass through a particular actor (in this case, Dickinson, Gauguin, or Brontë.) The higher the betweenness score, the greater the number of geodesics that pass through the individual in question. The matrices were also broken into blocks of structurally equivalent actors using the CONCOR algorithm and the density matrix of the blockmodel was used to produce the sociograms in Figures 1, 8, 9, and 10.

Findings

The ideas expressed by Farrell (2001) imply that the social structure most conducive to creativity is the group that is tight enough to be cohesive but not so tight as to induce group-think. Translated into network analytic terms, this means that the *density* of the network should be somehow “moderate”. “Density” is, however, a somewhat relative term. The formula to calculate the density of a network (the actual number of ties divided by the possible number of ties) gives a percentage of possible ties actualized, but just whether this percentage should be considered high, low, or in between depends on the context of the network. It is relative and its power comes from comparing across situations. With Dickinson, Gauguin, and

Brontë, the comparison is among periods in each of their lives – comparing the density of the highly creative periods with that of the less innovative and productive ones.



Looking at the network densities for each of them across time reveals striking similarities, as seen in Figures 2, 3 and 4. Note that network density is almost ex-

actly the same for each of them during their creative periods – 1858–65 for Dickinson (density 0.4737), 1846–47 for Brontë (density 0.4744), and 1887–89 (density 0.4848) and 1892–93 (density 0.4762) for Gauguin. (The period 1896–97 [density 0.3030] for Gauguin is problematic – the period of two masterpieces, but not great innovation – and this period displays network characteristics more in line with non-creative periods than with creative ones. There is a difference between innovation and mastery.) This means that just under half of the ties possible in the first order zone around the artists were actualized.

It is possible to apply a chi-square to these findings using the null hypothesis that whether a particular time period in an artist's life is "creative" or not (is one of the four periods – one each for Dickinson and Brontë, two for Gauguin – where significantly innovative work was produced) is independent of network density. The median value for the average network density over the 17 time periods (seven each for Gauguin and Brontë and three for Dickinson) in the artists' lives is 0.38. The average for the "creative" periods is 0.475. There is evidence ($p=0.0006$) that the creativity or not of the period is correlated with whether or not the average network density is close (within 0.015) of the median value of 0.475. Because of the small n involved, we should not make too much of these scores, but they do indicate the possibility that the network density of 0.475 is significant.

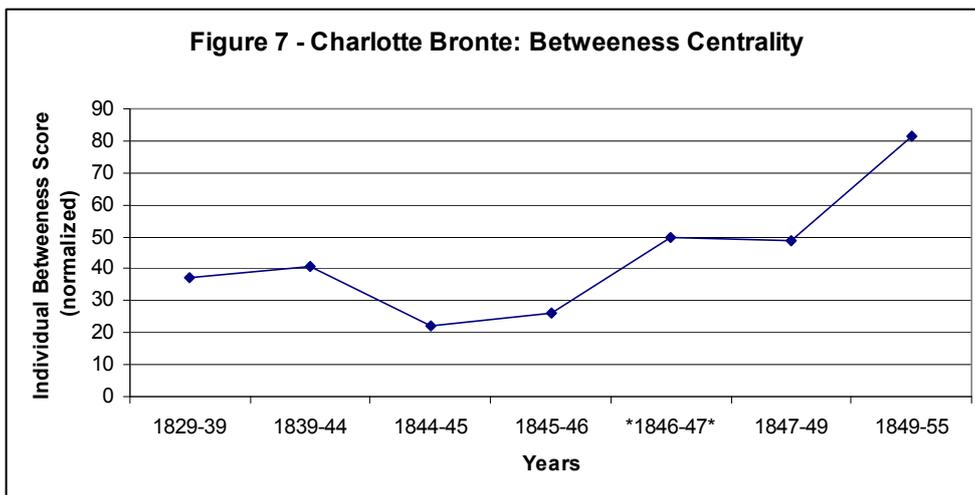
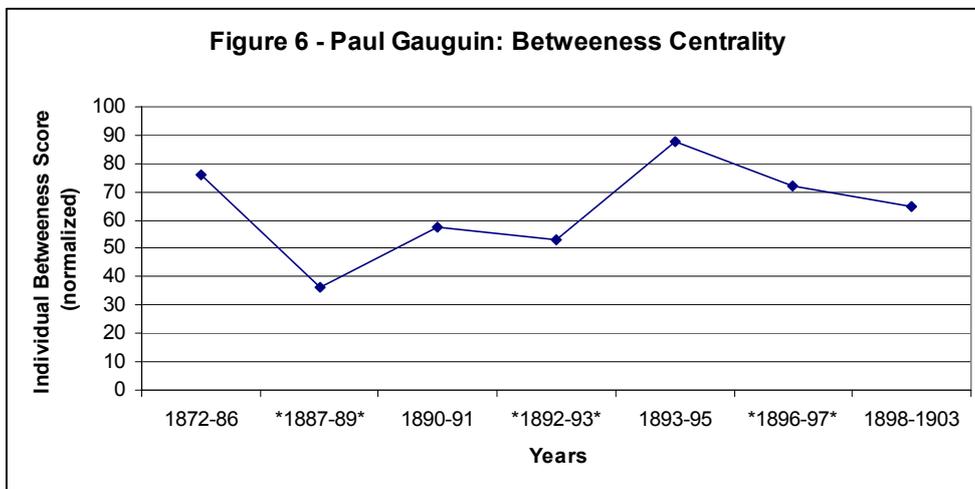
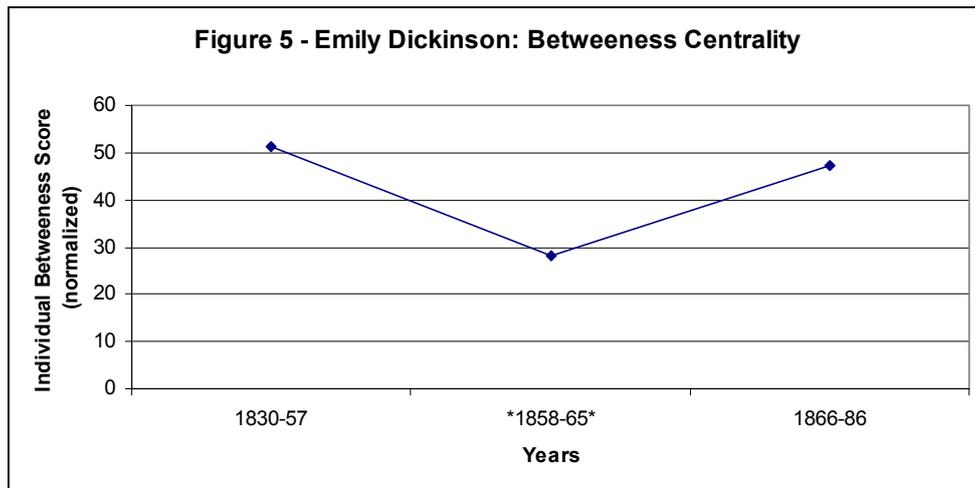
The second interesting point to note is the pattern across time of the degree of density. For both Dickinson and Gauguin, the creative periods are high points of density rising out of valleys of very low density – as low as 0.2687 for Dickinson (about one in four possible ties actualized) and 0.2095 for Gauguin (about one in five.) The periods of creativity are periods of a *drawing together* of the network following periods of very low density – extreme fragmentation. Collins argues that periods of innovation occur during times of either consolidation or fragmentation. For Dickinson and Gauguin, periods of innovation are periods when the network is consolidating after becoming very loose and before fragmenting again. For Brontë, however, the density of the innovative period of composing *Jane Eyre* follows two periods totalling about two years when the density of her correspondence network was quite high – 0.5619 and 0.5604, significantly higher than the 0.4744 density of 1846-47. This pattern fits in well with Collins' theory that creative periods come when the number of philosophical schools is either expanding *or* contracting. While Dickinson and Gauguin had creative periods when their social networks were becoming more dense (contracting), Brontë had her creative period while her social network was becoming less dense (expanding.) This seems to indicate that there is an optimum point for density of these networks. The second interesting conjecture that arises from the Brontë pattern is that the correlation between density and creativity is indeed a correlation with a *particular* density and not with a relative density – not, that is, with a pattern. Looking at the Dickinson and Gauguin graphs in Figures 2 and 3, it is reasonable to speculate that periods of higher density might be an outcome of creativity – that artists are excited and enlivened by their creations and that this causes a "buzz" within their

circles that shows up as increased density within the first order zone. The Brontë pattern, however, indicates that the observed density during the creative periods is not merely relatively high, but is a particular value.

One question that arises in relation to these results is to what degree the individual members of the network differ during the different time periods and whether or not those possibly different memberships matter. Wellman and Wortley (1990) show that individuals receive different types of support (emotional aide, financial aid, etc.) from different types of members of their social networks (people who share age similarity, extended kin, etc.) A second question is whether or not the *strength* of the ties themselves changes over time and is correlated with changes in creativity. In this dataset, ties are coded simply as either present or absent. There is no variation coded with regard to intensity of the contact. Given the nature of the dataset (missing letters, deducing relationships from external or third-party evidence), imputing tie strength would be tenuous. Nevertheless, the question of the correlation of tie strength with creativity is an interesting one. Further research beyond the basic structural analysis presented here should investigate the memberships of the networks with regard to these two questions.

The implication here is that creative production is correlated with the shape of the first order zone network surrounding the creator. Not only does the general network around the artists matter, but as individuals, Dickinson, Brontë, and Gauguin all experience changes in their network resources during these times. The degree to which they can reach others in the network, the number of others they can reach and their position as the sole bridge between different factions in the network changes over time.

Bridges between cliques give some actors (i.e., those part of the bridge) easier access to social goods and other prizes, such as information and ideas. Granovetter (1973, 1974) gives strong evidence of the usefulness of these weak ties in his studies of job seekers. Weak ties that bridge cliques are helpful – powerfully so – in gaining the goal. The changing structure of the overall network and the changing nature of ego's position within that network can be seen by looking at betweenness centrality scores.



Recall that betweenness centrality is a measure of the number of geodesics (shortest pathways between any two nodes) that pass through each node in the network. When a network member is the bridge between otherwise separated cliques (when they are, in Burt's [1992] terms, surrounded by "structural holes"), they tend to have high betweenness centrality scores because they are more likely to be on the

unique pathway that more geodesics follow. As Burt and others (e.g., Hannerz 1980; Uzzi & Spiro 2005) have pointed out, this position as the link between cliques has important advantages. The “brokers”, Burt argues (2004: 349), “are at higher risk of having good ideas” because they have access to a more widely divergent array of information and of ways of thinking than do those who have access to only one small world or group. In theories of creativity, this position is implicitly esteemed. “Kaleidoscope thinking” (MacLeod et al. 1996) has an implication of betweenness in it and Csikszentmihaly (1996) also implies betweenness when he asserts that creativity is more likely to happen in places where many different groups collide. Although all three of the artists are central to their networks and are directly tied to everyone in them (an artifact of the data collection), their individual betweenness centrality scores are sometimes *lower* during periods of creativity, as Figures 5, 6, and 7 show. But during times of intensely creative innovation, both Dickinson and Gauguin had lower individual betweenness centrality scores than at any other times in their careers. This pattern did not hold for Brontë, however, whose betweenness score for the period 1846–47 was the second highest of any time in her life. The chi-square test showed no significance for any target interval of betweenness scores and the creativity or not of the time period in the artists’ lives.

Podolny (2001) offers an interesting way to think about betweenness in this context. He argues that in situations of egocentric uncertainty, where “a focal actor’s uncertainty regarding the best way to convert a set of inputs to an output desired by a potential exchange partner” (2001: 33), structural holes (and, therefore, the possibility of high betweenness scores) are highly valuable. Where egocentric uncertainty is low, structural holes have less value to ego. We could plausibly argue that it is possible to reverse the logic of Podolny’s argument and say instead that in situations of relatively few structural holes, there is less egocentric uncertainty and that, although a period of egocentric uncertainty may precede periods of creative productivity (as in the cases of Dickinson and Gauguin but not of Brontë), periods of creativity are times of clarity of vision or of intellectual certainty. (There is some evidence of this in Csikszentmihaly’s [1996] arguments about “flow.”) Structural holes are not valuable in situations of egocentric certainty when the focal actor is sure of the best way to produce an appropriate output or, more importantly for this context, the focal actor, feeling sure of his or her process, does not check the suitability of the output against a wide-ranging (rich in structural holes) set of alters and, therefore, does not fall into the trap of restraining creative, innovative, and deviant ideas. During periods of creativity and innovation, creative producers are either sure of acceptance or, more likely, unconcerned that their product might be unacceptable to potential alters.

Another possibility is that the betweenness centrality measures are not adequately capturing the existence of the *salient* structural holes. Because these networks attempt to present (as closely as possible) the totality of the creator’s social network, mundane and possibly unimportant contacts are included along with

more artistic and literary contacts, mixing together the relevant with the irrelevant. Given the ineffable nature of artistic inspiration, it is difficult to know, however, precisely *which* contacts should be excluded from the networks as unimportant. “Groupthink” theories, for example, imply that contact with others who are not particularly creative (in the rule-breaking way) will have the effect of dampening innovative thinking. The inclusion, therefore, of non-creative people in the network is necessary for fully understanding the processes at play. Similarly, Burt argues that the contact between divergent small worlds is the key to innovation. It is possible and even probable that connections to small worlds that are not explicitly concerned with artistic endeavor are useful in generating innovative ideas when their ideas and norms come into contact with other ideas and norms from other small worlds, explicitly artistic or not. When looking at an individual’s complete social network, deciding which small worlds are irrelevant is probably an impossible task. One way to possibly attack this issue would be through the lens of Bourdieu’s ideas about the field (1985). Looking at the field as a network of relationships, the question might be one of determining where the various blocks to which an artist is tied are placed within the field. Not all positions in the field are equal when it comes to generating innovative ideas.

Based on the different network properties, we can conjecture that it was not when the artists were alone, linking wildly different ideological worlds, that they were most creative, but when they were attached to others in a more moderate way and when those others were close to each other, although, again, not so close as to form one cohesive group. The sociograms of Dickinson for each of the three time periods illustrate this.

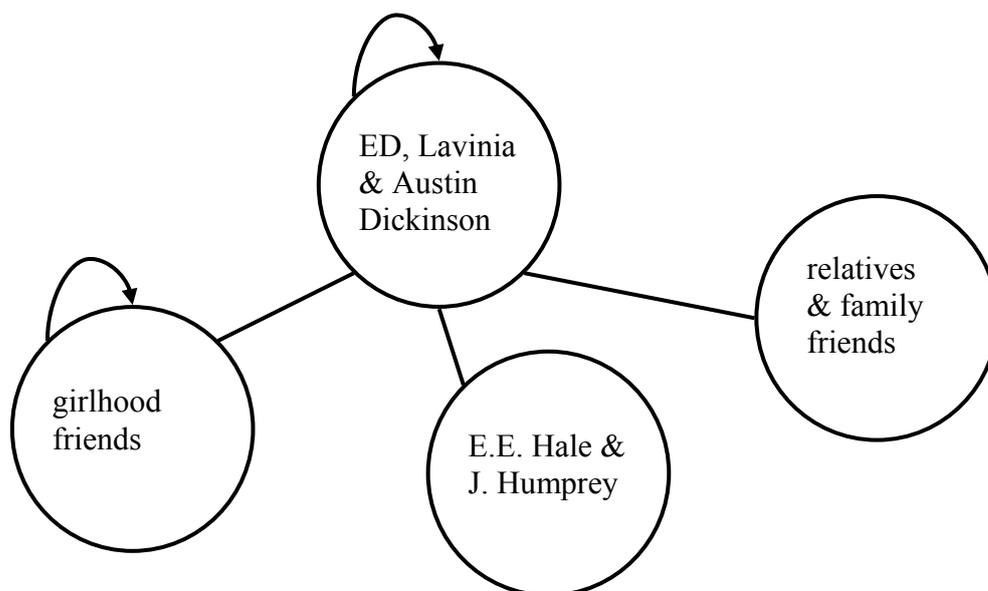


Figure 8: Emily Dickinson 1850–1857

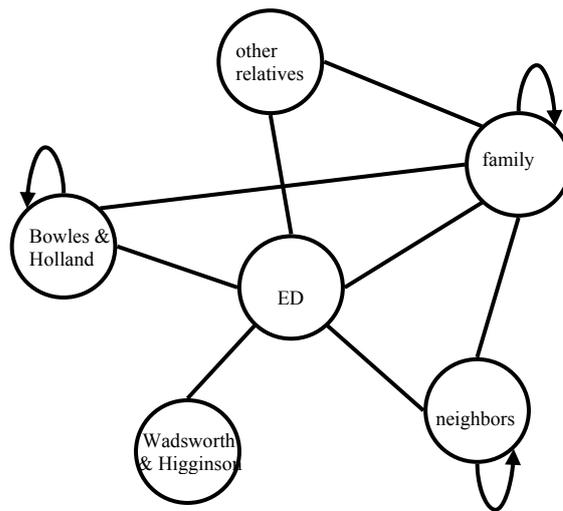


Figure 9: Emily Dickinson, 1858–65

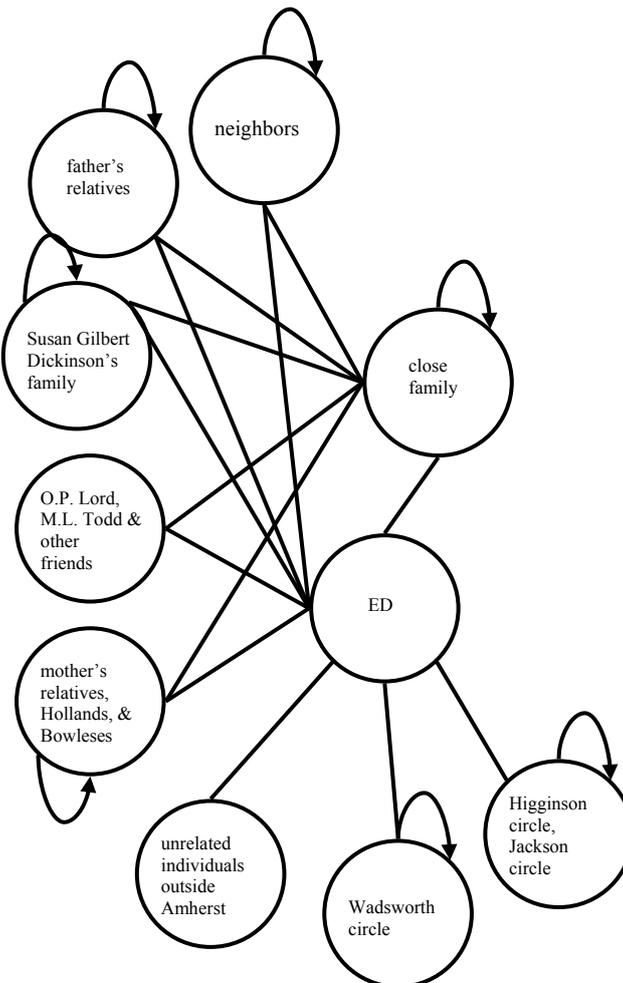


Figure 10: Emily Dickinson, 1866–86

As Figures 8, 9, and 10 show, Dickinson's network evolved and spread out over time. At first, during the 1850–57 period, she was so closely tied to her brother and sister, Austin and Lavinia Dickinson, that the three are structurally equivalent.⁴ In the 1858–65 period, when her poetic innovativeness flowered, she is structurally distinguishable and has ties to many groups, which are not completely segregated from each other, for the most part. But by the third period, 1866–86, her networks have dispersed to a great extent and she has many ties that are not connected to the rest of her network at all. There are, for example, 12 mostly isolated individuals in the block marked “unrelated individuals outside Amherst” on the model. She has been pulled into too many directions – the structural stability necessary for creative innovation is gone.

Underlying this reasoning is an assumption that the letters written by each of these creators are important parts of their social networks and that because of the isolation that each experienced, the letters are substitutes for much face-to-face interaction. It is important, therefore, to examine the letters themselves with regard to the content of those interactions.

The Letters

The letters used to construct the correspondence networks also show how the content flowing among the network members contributed to the formation of creative ideas. Looking at the letters themselves, we can see that the artists actively solicited support and critical feedback for their endeavors from others in their networks.

The vast majority of information contained in the letters is relatively mundane. For example, Gauguin, the most impoverished of these artists, constantly implores his contacts to send him more money. As a typical example, he wrote to his friend Emile Shuffenecker from Martinique on August 15, 1887 (Gauguin 2003: 86)

to do all that is possible to send me 250 or 300 francs immediately. Sell 40 of my pictures at 50 francs each, everything I possess, at any price; but I must get out of here, otherwise I shall die like a dog.

Brontë, who kept the composition of *Jane Eyre* a secret from everyone except her two sisters, wrote On December 13, 1846, to her friend Ellen Nussey, for example, of the weather and her family's illnesses (Barker 1997: 157).⁵

I hope you are not frozen up in Northamptonshire – the cold here is dreadful I do not remember such a series of North-Pole-days ... I cannot keep myself warm – We have all had severe colds and coughs in consequence of severe weather – Poor Anne has suffered greatly from asthma – but is now I am glad to say rather better ...

Dickinson wrote frequently to friends and relations to shore up personal relationships, as in her letter to Samuel Bowles from early April 1862 (Dickinson 1958 vol. II: 402) expressing her regret that a planned visit by him had been delayed:

Dear friend. The Hearts in Amherst – ache – tonight – You could not know how hard – They thought they could not wait – last night – until the Engine – sang – a

pleasant tune – that time – because that you were coming – The flowers waited – in the Vase – and love got peevish, watching...

But each of the three artists also explicitly asked others in their networks of correspondents for serious critique of their work. In an often-cited letter to the writer and editor Thomas Wentworth Higginson written on April 15, 1862, Dickinson wrote (Dickinson 1958 vol. II: 403):

Are you too deeply occupied to say if my Verse is alive? The Mind is so near itself – it cannot see, distinctly – and I have none to ask – Should you think it breathed – and had you the leisure to tell me, I should feel quick gratitude – If I make the mistake – that you dared to tell me – would give me sincerer honor – toward you...

Higginson replied (the letter itself is now, however, lost or destroyed) evidently giving critical feedback on the poems she had enclosed and Dickinson answered him ten days after her initial letter, sending him more poems for his critique (Dickinson 1958 vol. II: 404): “Thank you for the surgery – it was not so painful as I supposed. I bring you others – as you ask – though they may not differ...”

Thus began a literary correspondence that lasted until Dickinson’s death and was of enormous importance to them both (Wineapple 2008). Although almost all of his letters to her are missing, it is clear from her letters to him that Higginson gave frequent and extensive feedback on the poems that Dickinson sent him, for example (Dickinson 1958 vol. II: 408–9):

Your letter gave no Drunkenness, because I tasted Rum before – Domingo comes but once – yet I have had few pleasures so deep as your opinion, and if I tried to thank you, my tears would block my tongue – ...I smile when you suggest that I delay “to publish” – that being foreign to my thought, as Firmament to Fin – ... You think my gait “spasmodic” – I am in danger – Sir – ... But, will you be my Preceptor, Mr Higginson?

Later in August 1862, she wrote to him about two poems (Dickinson 1958 vol. II: 414): “Are these more orderly? I thank you for the Truth –” and continued to ask his opinions for the next 24 years.

When Dickinson told Higginson in her first letter that she had “none to ask” other than him about her poetry, she was not being quite honest. Perhaps even more important to Dickinson than her correspondence with Higginson was her relationship with Susan Gilbert Dickinson, her sister-in-law and next door neighbor to whom she sent more correspondence than any other person (Smith 1992; Hart & Smith 1998). Smith (1992) argues that Emily and Susan corresponded over the poems, refining and reworking them in what amounted to a “poetry workshop”. As an example, Smith notes the exchange between the two women regarding Dickinson’s poem “Safe in their Alabaster Chambers” (Smith 1998: 180-2). Having sent Susan a first version of the poem in summer 1861 (well before she began her correspondence with Higginson) and having received critical comments regarding the second stanza, Emily rewrote the poem and sent it to Susan with a note reading “Perhaps this verse would please you better – Sue –” (Dickinson 1958 vol. II: 379). Sue responded (Dickinson 1958 vol. II: 379–80):

I am not suited dear Emily with the second verse – It is remarkable as the chain lightening that blinds us hot nights in the Southern sky but it does not go with the ghostly shimmer of the first verse as well as the other one – It just occurs to me that the first verse is complete in itself it needs no other, and can't be coupled...

Although he never would have asked anyone to be his “preceptor,” Gauguin also spent considerable time in his letters discussing his own and other painters’ art works, including sketches in the letters and even sending paintings through the mails. During his first creative period, on July 8, 1888, Gauguin wrote to his friend Emile Shuffenecker (Gauguin 2003: 99):

Also I have done some *nudes*, which ought to please you. And not at all in the Degas style. The last is a fight between two boys near the river, quite Japanese, by a Peruvian Indian. Very little finished, the lawn green and upper part white.

Six weeks later, he again wrote to Shuffenecker, continuing an epistolary discussion on art technique and theory and including a piece of artwork (Gauguin 2003: 100):

You are now in your element since you need disputatious struggle to encourage you. A hint – don't paint too much direct from nature. Art is an abstraction! Study nature then brood on it and treasure the creation which will result, which is the only way to ascend towards God – to create like our Divine Master.

Gauguin also discussed his artistic theories with the painter Emile Bernard, with whom (along with de Haan and Laval) he developed the ideas that were the basis for Synthetism and Cloisonnism. For example, in a November 1888 letter from Arles, Gauguin wrote (Gauguin 2003: 112):

You discuss shadows with Laval and ask me if I am in accord. So far as regards the analysis of light, yes. Look at the Japanese who are certainly excellent draughtsmen, and you will see life depicted in the open air and in the sunshine without shadows, colour being used only as a combination of tones, diverse harmonies, giving the impression of warmth, etc.

Gauguin's most infamous artistic relationship, of course, was with Vincent van Gogh. Even before their disastrous nine weeks in Provence, Gauguin and van Gogh were in correspondence with each other, discussing their work in great detail and exchanging paintings through the mail. Van Gogh wrote to Gauguin (Gauguin 2003: 106–08):

... your general idea of the impressionist, of which your portrait is the symbol, is striking. ... I have a self-portrait all ash-coloured. The ash colour comes from mixing veronese with orange mineral on a pale veronese background, and dun-coloured clothes. But in exaggerating my personality I sought rather the character of a simple adorer of the eternal Buddha. It has given me a lot of trouble, but I shall have to do it all over again if I want to succeed in expressing the idea. I must get myself still further cured of the conventional brutishness of our so-called civilization, in order to have a better model for a better picture.

Discussions of her work are much less extensive in Brontë's letters because, unlike Dickinson and Gauguin, Brontë was in constant face-to-face contact with her literary circle, her sisters Emily and Anne. Barker (1994: 500) writes that, “...the sisters wrote their books in close collaboration, reading passages aloud to each

other and discussing the handling of their plots and their characters as they walked round and round the dining-room table each evening.”⁶ The correspondence networks for Gauguin and Dickinson work so well as proxies for their social networks because they were both so cut off from any other form of communication with their peers. Isolated in Haworth Parsonage, Charlotte Brontë also substituted correspondence for other forms of social interaction, with the important exception of her two sisters. Unlike Dickinson, who sent poems in letters to her sister-in-law next door, or Gauguin, who discussed ideas about the use of color from across oceans, Brontë had her chief supporters and critics living in the same house.

Nevertheless, like Dickinson with Higginson, even Brontë appealed by letter to an eminent person, asking his opinion of her work. In 1837, she sent a letter containing some of her poems to Robert Southey, the Poet Laureate of England. Her letter to him is missing, but she saved his reply to her in which, although he admitted (Barker 2002: 47) that “You evidently possess & in no inconsiderate degree what Wordsworth calls ‘the faculty of Verse’”, he nevertheless advised her that “Literature cannot be the business of a woman’s life: & it ought not to be.” Brontë wrote back to him, thanking him for his advice but, fortunately, ignoring it. Other communications about her work are sparse. Only after her sisters’ deaths did Brontë solicit serious critique from anyone else.

While the contents of the letters are interesting and indicate how the artists were sharing ideas about their work with others in their networks, I emphasize that for Dickinson, Gauguin and Brontë, the letters were an important substitute for many face-to-face interactions. The letters are a record of interactions – both the content and the pattern. That record would not have existed if the artists had been in positions to have more casual connections to their networks. The conversations that Gauguin had with Bernard, for example, about theories of painting in all probability would have happened in the cafes of Paris had Gauguin been there. The isolation of Dickinson, Gauguin, and Brontë, however, give us a mechanism by which to trace the content and pattern of those conversations. This bare bones analysis of the letters can be pushed further in future research to investigate the content of the letters in order to see if it changes over the course of time and, if so, in what ways. Is there a difference, for example, in the content of the letters during creative periods than at other times? If so, how does that difference manifest itself? Do we ever see evidence of “flow”, of “kaleidoscope thinking”, of “group think”, of “bricolage”, etc? And, if so, when does that evidence appear? That analysis is beyond the scope of the present paper.

Conclusion

Some social scientists researching creativity have searched for individual attributes that correlate with creativity. By confining their research to only those people who are considered creative, however, researchers have undermined their ability to argue that the attributes of creative people differ from the attributes of

non-creative people. This research attempts to overcome that problem by comparing across periods in the lives of individuals. By thinking of outcomes, rather than individuals, as creative, this paper argues that it is possible to compare creative with non-creative time periods in the individual's life in order to make a case that there are indeed attributes that correlate with creativity. These attributes, however, are social rather than individual. Creativity is correlated with a social attribute, but is also conceived of as an action that has an outcome. The correlation with particular network patterns suggests an explanation for the life-course findings about changing creativity over time: social network patterns are changing over the life course. The changes in the shape of the networks may also be tied to external changes, from the changing nature of the art market to the possibilities or pressures to join an artistic movement (as in Accominotti 2009.)

The findings here are in line with some earlier research. Farrell (2001) provides evidence and cogently argues that creativity flourishes when individuals receive social support from a group but are not so tightly embedded in that group that their individuality is suffocated. This may be the explanation for the current finding of an average density of 0.475 as the optimum point for creative output. This is perhaps the "moderate" density that we are led to expect by not only Farrell, but also by Collins (1998) and by McLeod et al. (1996).

Second, the findings are in line with research indicating that creativity will flourish when the individual has ready access to a wide-ranging set of others (including perhaps other involved in artistic movements), but again, as the case of Charlotte Brontë reminds us, when the network is not so dense as to be stifling. The finding that this relatively dense web of connections is correlated with creativity fits well with findings and arguments from Becker (1982) about the importance of an individual being attached to an art world in order to be productive and from Accominotti (2009) regarding the importance of membership in artistic movements.

The finding that betweenness scores do not seem to be correlated with periods of creativity does not fit the previous literature (Burt 1992, 2004; Uzzi & Spiro 2005) as well. There are several possible reasons for this, including that the complete individual network of ties is not the appropriate network to investigate with regard to this question.

This study has looked for social network attributes that are correlated with periods of creativity. I put forward no specific arguments about causation, but the findings do lend themselves to speculation which further research may resolve. There are still unanswered questions. In line with Wellman and Wortley (1990), we must ask whether or not the different memberships of the networks at different time periods have an important effect on creativity. Do the types of others to whom the artists are connected differ across time? To what degree? Are there similarities across all the artists studied? If so, how might those similarities be important? The strength or weakness of the ties may also, as Granovetter (1973) suggests, play an important role in understanding the dynamics of creativity. Does

tie strength with others vary over time? How so? Are there similarities across the artists? If so, what does this tell us about the strength of weak ties, for example, when it comes to creative endeavors? Finally, the content of the letters themselves has yet to be systematically analyzed, especially with regard to the theories of “flow”, “kaleidoscope thinking”, “bricolage”, and “group think”. Does the content of communication change over time? Is it different during periods of peak creativity? By looking more deeply at the correspondence of isolated artists over periods of greater and lesser creativity, we may be able to see not only correlation, but causation, in the processes at work.

Katherine Giuffre is Associate Professor of Sociology at Colorado College in the USA. She is the author of *Collective Creativity: Art and Society in the South Pacific* (Ashgate, 2009). Her interests include the sociology of art, social network analysis, and Polynesian studies. E-mail: KGiuffre@ColoradoCollege.edu

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Notes

- 1 For the sake of brevity, this period is labeled “1892-93” in the analysis that follows.
- 2 Burning journals, letters and other personal writing after a person’s death was commonplace during the 18th and 19th centuries. Jane Austin, for example, would have been an obvious candidate for this study, but only a very tiny fraction of her letters escaped incineration after her death (Austin 1997).
- 3 Gauguin’s changes of location and periods of creativity do not, of course, exactly match calendar years. Letter networks for each period were based on the actual dates of the period (such as his first arrival in Tahiti in June 1891), but for the sake of brevity were labeled in five two-year periods, which roughly approximate the actual dates, from 1887 through 1897.
- 4 Note that Dickinson is grouped into the same structurally equivalent block with her siblings Austin and Lavinia in Figure 8 (the earliest period), but not in Figures 9 and 10 (the later periods.) Actors are structurally equivalent when they have ties to the same others. In the first period, Dickinson shared with her siblings almost exactly the same pattern of ties to others. In later periods, she made connections to others that her siblings did not share and, therefore, made herself structurally distinct from them.
- 5 All spelling, grammar, and punctuation from letters are [sic].
- 6 Their brother Branwell, already deep in alcoholism, was kept in the dark about his sisters’ collaboration and his own literary and artistic ambitions languished and came to nothing other than a handful of poems published in local papers.

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