

Evolving Networks... And the Finest in Jazz !

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May 22nd-23rd 2008

Introduction

- ▶ The paradox. . .
 - Creativity is a collective process. . .
 - But rewards and success are often individual!
- ▶ Question. . .

How do creative firms organize so as to combine microincentives with macrobehavior?
- ▶ This study. . .

We analyze the evolving collaboration structure among artists within the Blue Note jazz label

Networks and creativity

- ▶ Two opposite architectures are expected to emerge:
 - The first is based on individual performance. . .
 - ⇒ Scale free networks
 - The second is based on collective action. . .
 - ⇒ Small world networks

- ▶ Similar work. . .
 - In the music industry: Uzzi & Spiro (2005), Smith (2006)
 - In academics: Moody (2004), Goyal et al. (2006)

Jazz and why it all matters!

- ▶ Jazz is a symbol of creativity. . .
 - Reinterpretation
 - Fusion
 - Improvisation

- ▶ As intermediate structures linking the creative ideas to the market, labels face a double choice:
 - They must specialize in existing styles. . .
 - But they must also diversify!

The Blue Note story

- ▶ Founded in 1939 by Alfred Lion and Francis Wolff
- ▶ Ownership: Liberty Records (since 1965), United Artists (since 1969), and EMI (since 1979)
- ▶ Main artists: Art Blakey, Horace Silver, Jimmy Smith, Lee Morgan, Donald Byrd, Lou Donaldson



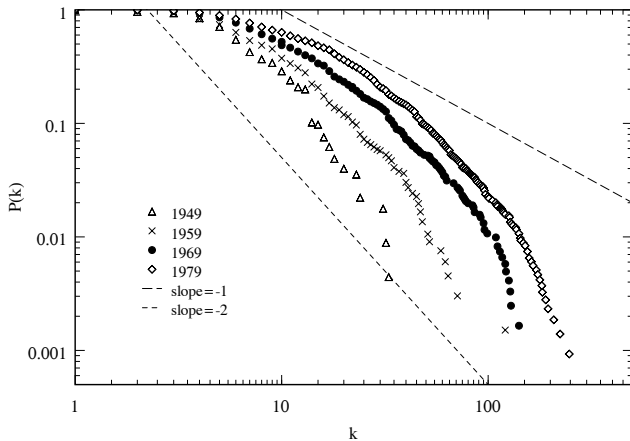
Data and methods

- ▶ We study the evolution of the Blue Note label during the period from 1939 to 1979...
 - 1349 sessions
 - 1942 artists

- ▶ For each year, we constructed the affiliation network and its unipartite projection...
 - Each artist is represented by a node
 - Two artists are linked together if they played in the same session

Analysis and results (1/4)

Stars and prestige...



Analysis and results (2/4)

Are the rich getting richer?

| | 1949 | 1959 | 1969 | 1979 |
|----------------------------|-------|-------|-------|-------|
| Average degree of artists | 8.67 | 11.54 | 16.07 | 23.07 |
| Standard deviation | 5.5 | 10.61 | 18.39 | 26.56 |
| Size of main component | 200 | 621 | 1173 | 1897 |
| — in % | 88.50 | 93.81 | 96.78 | 97.68 |
| Main component sensitivity | | | | |
| — without top 2.5% | 82.3 | 87.31 | 94.22 | 93.61 |
| — without top 5% | 74.34 | 82.33 | 90.84 | 91.09 |
| — without top 10% | 59.73 | 67.97 | 77.56 | 83.83 |
| — without top 20% | 23.45 | 34.59 | 46.04 | 63.9 |

Analysis and results (3/4)

Is the world getting smaller?

| | 1949 | 1959 | 1969 | 1979 |
|--------------------|-------|-------|-------|-------|
| Actual Path Length | 3.48 | 3.65 | 3.42 | 3.27 |
| Random Path Length | 2.26 | 2.23 | 2.15 | 2.14 |
| Path Length ratio | 1.54 | 1.64 | 1.59 | 1.52 |
| Actual Clustering | 0.565 | 0.416 | 0.366 | 0.374 |
| Random Clustering | 0.327 | 0.226 | 0.174 | 0.170 |
| Clustering ratio | 1.73 | 1.84 | 2.1 | 2.2 |
| Small world Q | 1.12 | 1.12 | 1.32 | 1.45 |

Analysis and results (4/4)

Is success related to the number of collaborations?

| Artists | Charts | | Network | |
|---------------------|--------|-------|----------|--------|
| | Albums | First | Sessions | Degree |
| Horace Silver | 2 | 1965 | 83 | 183 |
| Lou Donaldson | 8 | 1963 | 62 | 132 |
| Donald Byrd | 7 | 1964 | 81 | 247 |
| Jimmy Smith | 6 | 1962 | 47 | 48 |
| Lee Morgan | 3 | 1964 | 103 | 143 |
| Duke Pearson | 1 | 1969 | 64 | 118 |
| Stanley Turrentine | 2 | 1967 | 71 | 162 |
| Brother Jack McDuff | 1 | 1969 | 14 | 43 |
| Lonnie Smith | 1 | 1970 | 11 | 31 |
| Bobbi Humphrey | 3 | 1974 | 19 | 73 |
| Marlena Shaw | 1 | 1975 | 15 | 65 |
| Ronnie Laws | 1 | 1975 | 10 | 61 |
| Earl Klugh | 3 | 1976 | 15 | 126 |
| Noel Pointer | 1 | 1977 | 5 | 52 |

Conclusion

- ▶ The superstars and the unknown
 - We observe some preferential attachment. . .
 - But also an emerging small world. . .
 - With less and less stars !

- ▶ An implicit equilibrium?
 - Between specialization and diversification. . .
 - Between established artists and young talents. . .

- ▶ Success and performance
 - The highly connected artists are not always the most successful ones. . .
 - But they may contribute to overall performance!

Thank you!

"I'm gonna stay with the youngsters. When these get too old, I'm gonna get me some younger ones. Keeps the mind active."

Art Blakey, A Night at Birdland (Vol. 2), 1954.

