Communication, Networks and The Emeriti

Purposes

• To begin a discussion of how we communicate in today’s complex environment

• Examine networks – social, biological, neural ...

• Examine the emeriti network and networks connected to us

• For fun, and based on network theory and big data, introduce work on an hedonometer

• We would like to hear your ideas about how to improve communication within and without the Emeriti
The Players

• Ralph Zegarelli
  • Computer Science
  • Emeriti Webmaster (following up on Walter Banzhaf’s lead)

• Michael Kahn
  • Psychologist and Contemporary Psychoanalyst
  • Editor of *Emeriti Matters*

• Kate Pendergast
  • Interim Vice President of Institutional Advancement
  • Kate and Casey Fish created a webpage enabling Emeriti to donate online
Communication

Digital and nondigital forms we use today or can use going forward
Email, hand delivered mail, telephone, the Emeriti Website, LinkedIn ...
To reach scholarship applicants, past scholarship recipients, future Emeriti and the UHart community
Communication – The Generations*

• The Greatest Generation 1910 – 1924 (age 107 – 93) (some of us)
  • Tom Brokaw said they were the greatest because they fought for what was right rather than fighting for selfish reasons
  • Communication in the 1930’s included The End Candlestick Phone Desk Set, Country Kitchen Wall Phone, The radio, newspaper, telephone and mail.

• The Silent Generation 1925 – 1945 (age 92 – 72) (most of us)
  • Silent because as a group they were not loud. They did not protest in Washington. There were no major wars to protest.
  • Communication 1951 – 1960 included the transistor radio, LP & EP records, Xerox machines and the computer

*Source - careerplanner.com/Career-Articles/Generations.cfm and Prezi.com
Communication – The Generations*

• Baby Boomers – 1946 – 1964 (age 71 – 53) (a few of us & some UHart faculty)
  • Grew up in a time of prosperity and an absence of world wars.
  • Communication included the computer floppy disk, pay-TV cable, the Apple I, nationwide programming, and the first mobile cellular phone.
• Gen X – 1965 – 1977 (age 52 – 40) (none of us and most UHart faculty)
  • Highly educated, technology literate and fiercely independent
  • Communication included Email and The World Wide Web

*Source - careerplanner.com/Career-Articles/Generations.cfm and Prezi.com
Communication – The Generations*

- Gen Y (Millennials or Gen Next) – 1977 – 1995 (age 40 – 22) (some UHart faculty)
  - Tenacious go-getters with an “I can do anything” spirit
  - They demand to be seen, heard and accommodated
  - Online social networking sites are vital forms of communication
  - Comfortable with technology and interact on social websites for a significant portion of their socializing.
  - Growing up through the Great Recession gives them a feeling of unsettlement and insecurity

*Source – Wikipedia and Vistage Chair Tim Shaver
Communication – a Small Survey

• Balancing an inverted pyramid of knowledge on a pinpoint of experience, I asked my niece (Gen Z), current students (Gen Z) and sons (Millennials) how they communicate.
  • Gen Z – text, Instagram and snapchat (email because you make me)
  • Millennials – text, email, Facebook, and phone
The Emeriti Website

- [www.Hartford.edu/emeriti](http://www.Hartford.edu/emeriti) or Search for University of Hartford emeriti or emeritus
- Google Analytics
Emeriti Matters – Editor Michael Kahn

• The Newsletter

Emeriti Matters
Emeriti Newsletter, Vol. 1, Issue 1, Summer 2017

Welcome from Robert Wallace, Chair, Executive Committee and Mike Kahn, Issue Editor
As colleagues who worked together for many years at the University but are now retired, we often lose track of the contributions and activities our Emeriti continue to make. However, we increasingly learn of often delightful hobbies, professional responsibilities, volunteer and organizational efforts, and scholarly accomplishments our Emeriti are continuing to perform. Some have developed new interests, or traveled far and wide. Some are using their talents to become politically active and continue scholarly work. We’ve learned that some are contributing to the general well-being of their communities in ways that they had little time for previously. Indeed, social scientists are helping us redefine “retirement” as an awkward term, inconsistent with increased life-span, advances in health care, and resource management. Learning becomes a never-ending challenge, both necessary and desirable, keeping our minds and bodies active, even though we can’t keep our wear and tear, and fear of senility or elusiveness.

In keeping with the effort to keep each other informed of our activities, and to encourage us to think creatively, the executive committee of the Emeriti Association has voted to issue a modest-sized newsletter, at least annually, distributed by mail and electronically to our members and to key positions in the University community and beyond. We intend our expenses to be minimal and not to detract from the student scholarships which we gladly fund and which are growing. We invite you to send us news of your activities, which your Emeriti colleagues would enjoy learning about in future editions, and any suggestions for format and content we might employ. Please use email address emeriti@hartford.edu.

The Emeriti Association of the University of Hartford comprises retired faculty and University administrators who have been granted emeritus status by the Board of Regents and who continue to contribute to the University’s vibrancy and growth. Additional members may be invited on a case-by-case basis as reviewed by the Executive Committee and submitted to the whole group for vote. New members need not have been granted emeritus status by the University, but should be individuals who have retired from the University and who have made important contributions to the University over the years. The EA has created an endowment to provide periodic scholarships for worthy undergraduate students.

The Executive Committee Celebrates Walt’s Retirement
The Executive Committee hosted a celebration for our outgoing President, Walt Harrison and his wife Elaine at the Miron Ru at Eastover in Simsbury on Thursday April 20. We presented Walt with a plaque honoring his 15 years of service to the University and our Executive Committee’s contribution to the newly established President Walter Harrison Endowed Faculty Development Fund.

We welcomed his future participation in our gatherings and fellowship for many years to come. All in all, a delightful evening.
Digital Alternatives

- **Instagram** - share pictures
- **Twitter**
  - “wait omg I have 240 characters!!!!! Woohoo this is so exciting how am I going to fill up this space right now.”
- **Facebook** - for friends an family?
- **LinkedIn** - I found most scholarship recipients with LinkedIn
- **Blackboard**
- **Skype/WebEx/GoToMeeting**
  - I use these sites for business and solving NY Times puzzles Friday - Sunday
Networks

Emerging area of study in complexity theory
UHart has a new minor in complexity theory
Jane Horvath and I are teaching one of the two required courses
Jane is teaching a President’s College course on networks
   (her students thought they were going to learn how to network)

Communities are subset of networks
What is a Network?*

A collection of nodes (vertices) and links (edges)

<table>
<thead>
<tr>
<th>System</th>
<th>Nodes</th>
<th>Links</th>
</tr>
</thead>
<tbody>
<tr>
<td>World-Wide Web</td>
<td>web pages</td>
<td>hyperlinks</td>
</tr>
<tr>
<td>Internet</td>
<td>computers</td>
<td>IP links</td>
</tr>
<tr>
<td>Citation Network</td>
<td>papers</td>
<td>citations</td>
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<tr>
<td>Social Network</td>
<td>individuals</td>
<td>friendships</td>
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<tr>
<td>Subway</td>
<td>stations</td>
<td>Tracks</td>
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<td>Neuronal network</td>
<td>neurons</td>
<td>Synapses</td>
</tr>
<tr>
<td>Kevin Bacon</td>
<td>stars</td>
<td>movie</td>
</tr>
</tbody>
</table>

*Source - SFI Network Science Short Course
Network Example

• Six Degrees of Separation
  • Six degrees of separation is the theory that everyone and everything is six or fewer steps away, by way of introduction, from any other person in the world, so that a chain of "a friend of a friend" statements can be made to connect any two people in a maximum of six steps. It was originally set out by Frigyes Karinthy in 1929 and popularized by a 1990 play written by John Guare.*

• Six Degrees of Kevin Bacon
  • Six Degrees of Kevin Bacon is a parlor game based on the six degrees of separation concept.
  • Movie buffs challenge each other to find the shortest path between an arbitrary actor and prolific character actor Kevin Bacon.

*Source - Wikipedia
Small-world Networks

Explanations of small-world networks:
Damon Centola    Dynamical Contact Patterns in a Primary School

\[ a. \text{ Regular} \quad b. \text{ Small-world} \quad c. \text{ Random} \]

\[ p=0 \quad \text{Increasing randomness} \quad p=1 \]
Examples of Complex Networks

The Internet

A Neural Network

A Social Network

A Metabolic Network

*Source - SFI Network Science Short Course
Martinez 1991. Ecological Monographs Artifacts or Attributes? Effects of resolution on the food web of Little Rock Lake, Wisconsin
Measures of Node Centrality

- **Degree of node:** number of links connected to the node
- **Eigenvector centrality:**
  - measure of the influence of a node in a network in which a node’s centrality depends on the sum of the centralities of its neighbors.
  - Related to Google’s PageRank
- **Betweenness centrality:**
  Number of shortest paths between pairs of other nodes that go through node of interest

*Source - SFI Network Science Short Course*
More Measures*

- **Average path length:**
  - avg. number of links in the shortest path between a pair of nodes

- **Clustering:**
  - Probability that two of your friends of themselves connected; triangle closure

- **Degree distribution:**
  - distribution of the node degrees across the system

- **Assortativity (disassortativity):**
  - Propensity for nodes with similar (different) degrees to connect to one another

- **Community Structure:**
  - Network has groups of nodes that are densely connected

*Source - SFI Network Science Short Course*
Seven Bridges of Königsberg

*Source - Wikipedia
Mary is the weak link (powerful position)
We need to find other ways to reach
• Future members
• Potential Scholars
• Past Scholars
• Nonparticipating members
Measuring Happiness

Most of the following slides were presented by Peter Dodds at the Data-driven Explorations of the Ecology of Human Stories, Big Data and Networks Short Course, NYC, July 28, 2017

Jane Horvath and I attended
Hedonometer

• From Wikipedia, the free encyclopedia

• A hedonometer or hedonimeter is a device used to gauge happiness or pleasure. Conceived of at least as early as 1880,[1] the term was used in 1881 by the economist Francis Ysidro Edgeworth to describe "an ideally perfect instrument, a psychophysical machine, continually registering the height of pleasure experienced by an individual."[2]

• More recently, it has been used to refer to a tool developed by Peter Dodds and Chris Danforth to gauge the valence of various corpora, including historical State of the Union addresses, song lyrics, and online tweets and blogs.[3][4][5] A version of the tool is available at hedonometer.org, which they call a sort of "Dow Jones Index of Happiness",[6] and hope will be used by government officials in conjunction with other metrics as a gauge of the population's well-being.
Hedonometer Goals

We’d like to build an ‘hedonometer’:

- An instrument to ‘remotely-sense’ emotional states and levels, in real time or post hoc.

Ideally:

- Transparent
- Fast
- Based on written expression
- Uses human evaluation
- Non-reactive
- Complementary to self-reported measures
- Improvable
The Shape of Stories

- The inspiration was this video by
- [Click to see Kurt Vonnegut video](#)

Six basic shapes: Tragedy, Icarus, Oedipus, Rags-to-Riches, Man-in-a-hole, Cindarella.
Hedonometer – Scale is 1 to 9 (1 sad 5 neutral)

Measuring the perceived happiness of a text:

Lyrics for Michael Jackson’s Billie Jean
“...She was more like a **beauty queen** from a **movie** scene.
...And **mother** always told me, be careful who you **love**.
And be careful of what you do 'cause the **lie** becomes the **truth**.
Billie Jean is not my lover,
She’s just a **girl** who claims that I am the one.
...”

<table>
<thead>
<tr>
<th>ANEW words</th>
<th>(v_k)</th>
<th>(f_k)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. love</td>
<td>8.72</td>
<td>1</td>
</tr>
<tr>
<td>2. mother</td>
<td>8.39</td>
<td>1</td>
</tr>
<tr>
<td>3. baby</td>
<td>8.22</td>
<td>3</td>
</tr>
<tr>
<td>4. beauty</td>
<td>7.82</td>
<td>1</td>
</tr>
<tr>
<td>5. truth</td>
<td>7.80</td>
<td>1</td>
</tr>
<tr>
<td>6. people</td>
<td>7.33</td>
<td>2</td>
</tr>
<tr>
<td>7. strong</td>
<td>7.11</td>
<td>1</td>
</tr>
<tr>
<td>8. young</td>
<td>6.89</td>
<td>2</td>
</tr>
<tr>
<td>9. girl</td>
<td>6.87</td>
<td>4</td>
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<td>10. movie</td>
<td>6.86</td>
<td>1</td>
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<td>11. perfume</td>
<td>6.76</td>
<td>1</td>
</tr>
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<td>12. queen</td>
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<td>1</td>
</tr>
<tr>
<td>13. name</td>
<td>5.55</td>
<td>1</td>
</tr>
<tr>
<td>14. lie</td>
<td>2.79</td>
<td>1</td>
</tr>
</tbody>
</table>

\[
u_{\text{Billie Jean}} = \frac{\sum v_k f_k}{\sum f_k} = 7.1
\]

\[
u_{\text{Thriller}} = 6.3
\]

\[
u_{\text{Michael Jackson}} = 6.4
\]
Song Lyrics

![Graph showing the mean valence over years]

mean valence $v_{avg}$

year


5.9 6.0 6.1 6.2 6.3 6.4 6.5 6.6 6.7 6.8
By Genre
Happiest Cities

Happiest Cities:

1. Napa, CA
2. Idaho Falls, ID
3. Longmont, CO
4. Simi Valley, CA
5. San Clemente, CA
6. Santa Rosa, CA
7. Davis, CA
8. Gilroy, CA
9. Logan, UT
10. Lafayette, CO
11. Nashua, NH—MA
12. Boulder, CO
13. Porterville, CA
14. Amarillo, TX
15. Asheville, NC
Other Examples

• By Region of the US
• Countries and Books
• Interactive Hedonometr http://hedonometer.org
• Last Monday was the saddest day on Twitter