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Appendix

Evolving Family Structures
Representation and Visualization

J. R. Hott [1]   W. N. Martin [1]   K. Flake [2]

[1]Computer Science, University of Virginia

[2]Religious Studies, University of Virginia

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Computer Science Interest

Time-evolving network

- Visualization
  - Chord diagram [Kassel et al., 1995, Holten, 2006, Kirk, 2012]
  - Flow Diagram [Harris, 1996]
- Temporal metrics

Data Collaborators

Nauvoo Community Project

- http://nauvoo.byu.edu/
- Jill Crandell
- Initial Nauvoo database
- 54,602 individuals, 17,886 marriages
- Focus on subset of this data

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Cast of Characters

Visualization examples centered on the following:

- Zina Diantha Huntington
- Prescendia Lathrop Huntington
- Henry Bailey Jacobs
- Brigham Young
- Joseph Smith
- Heber Chase Kimball
- Norman Buell

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Historical Research Interest

Questions to consider

- What is a marriage? What was it considered at the time?
- How does timing impact that definition?
- What is a family? What is a household?
- Do families and marriages align? What does it mean if they do not?
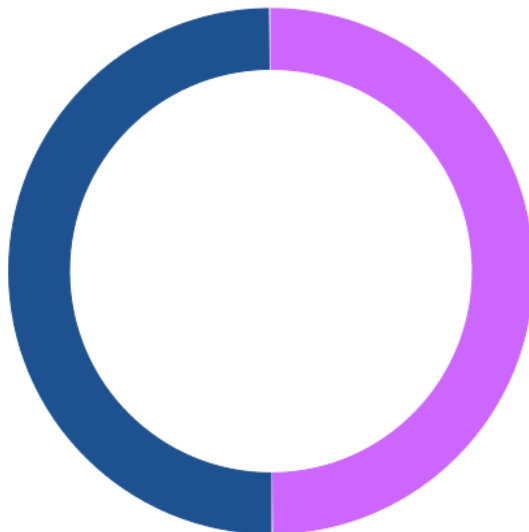- How do these family structures relate to ecclesiastical relationships?

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Marriage Structures

Figure: Chord diagram: Brigham Young ▸ Live demo ford.cs.virginia.edu/nauvoo

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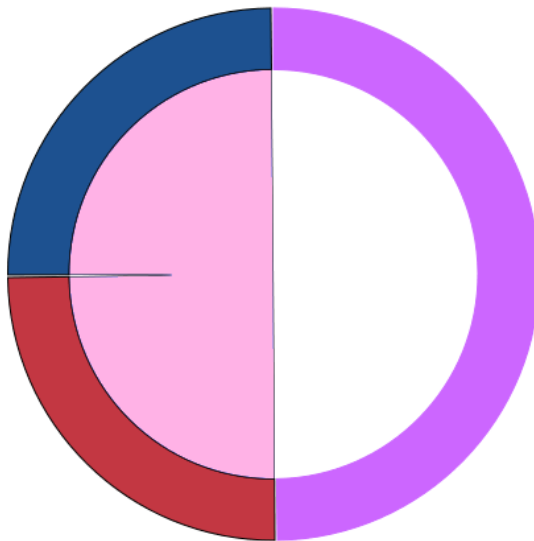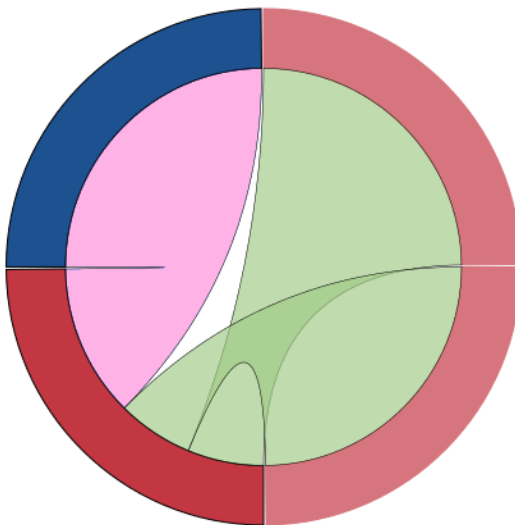○○

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Marriage Structures

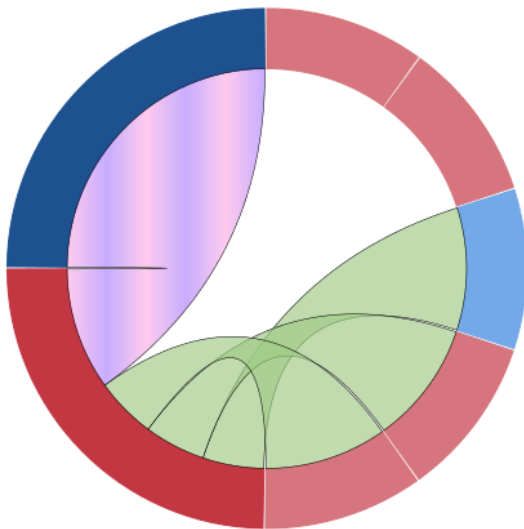Figure: Chord diagram: Marital Unit for Brigham Young ▶ Live demo

Marriage Structures

Figure: Chord diagram: Marital Unit for Brigham Young ▸ Live demo

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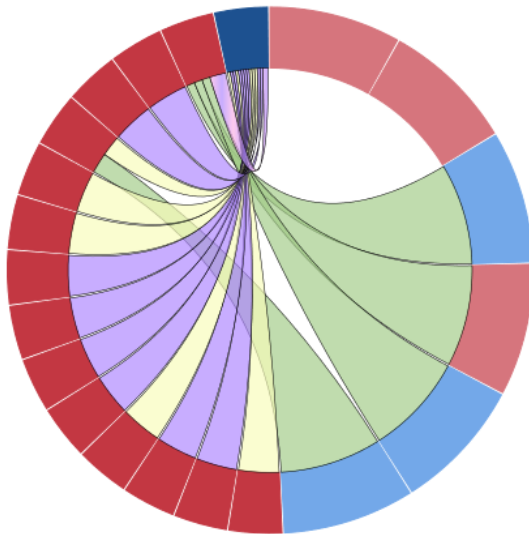Marital Structures
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Marriage Structures

Figure: Chord diagram: Marital Unit for Brigham Young ▸ Live demo

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Marriage Structures

Figure: Chord diagram: Marital Unit for Brigham Young ▸ Live demo ▸ More Complex ▸ Alt Example

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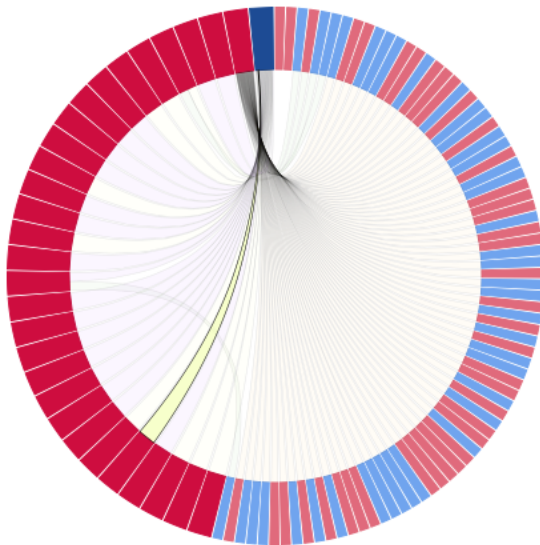Marital Structures
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Figure: Chord diagram: Marital Unit for Brigham Young

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Figure: Zina Diantha Huntington's marriages

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Lineage View

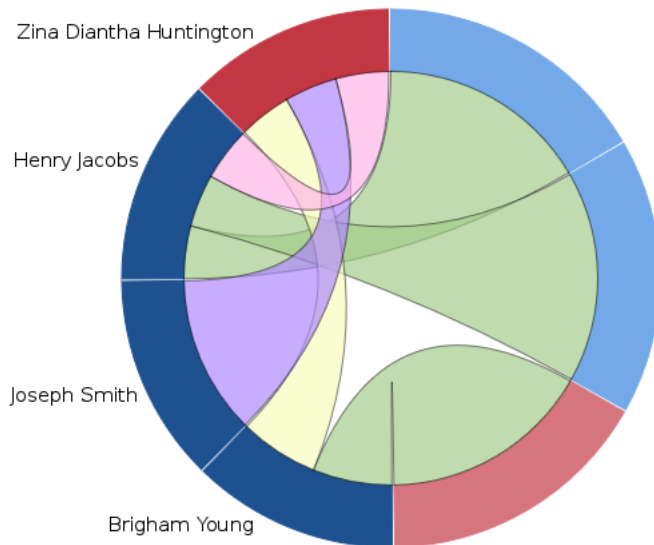## Zina Diantha Huntington

Zina Diantha Huntington
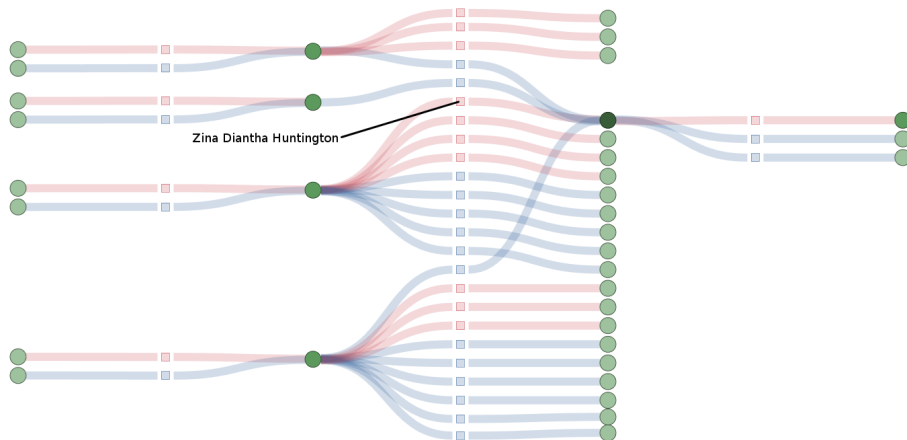
Figure: Flow Diagram from Zina Huntington's point of view ▸ Live demo

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Lineage View
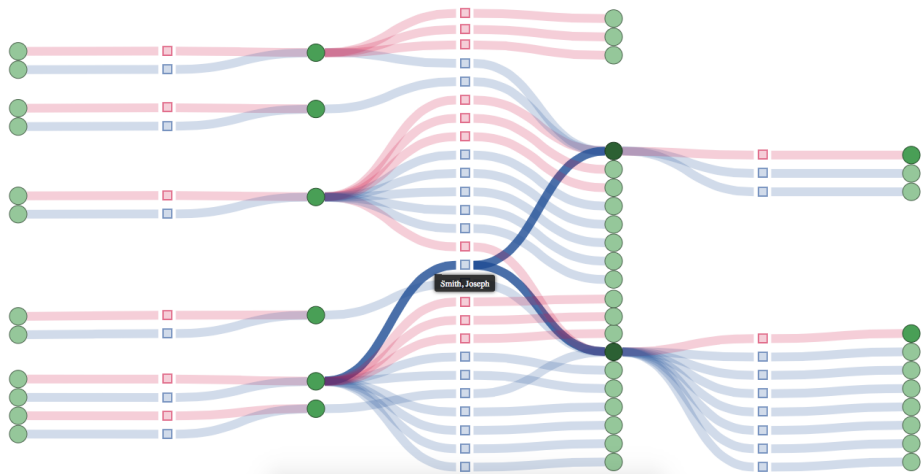
Figure: Flow Diagram from Zina and Prescendia Huntington's point of view ▸ Live demo

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Historical Research Questions

- What is a marriage? What was it considered at the time?
- How does timing impact that definition?
- What is a family? What is a household?
- Do families and marriages align? What does it mean if they do not?
- How do these family structures relate to ecclesiastical relationships?

Computer Science Interest

- Time-evolving network
- Visualization
- Temporal metrics

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Thank You

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  - www.cs.virginia.edu/~jh2jf
  - Samples:
    ford.cs.virginia.edu/nauvoo
- Institute for Advanced Technology in the Humanities
  - www.iath.virginia.edu

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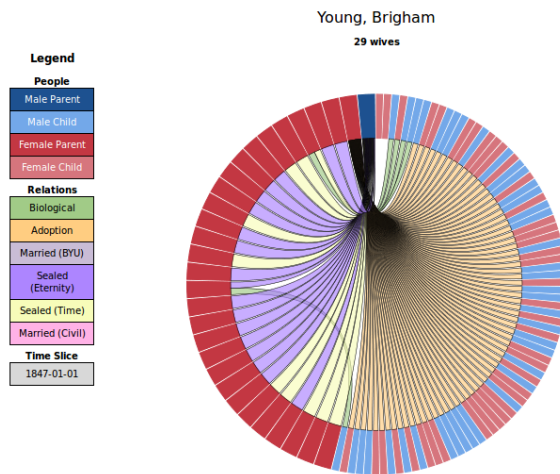Community experience distilled. Packt Publishing, Limited.

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Marriage Structures

Figure: Chord diagram: Marital Unit for Brigham Young ▸ Live demo ▸ Continue

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Evolving Marriage Structures

(a) 1838 (b) 1843 (c) 1843 (d) 1845
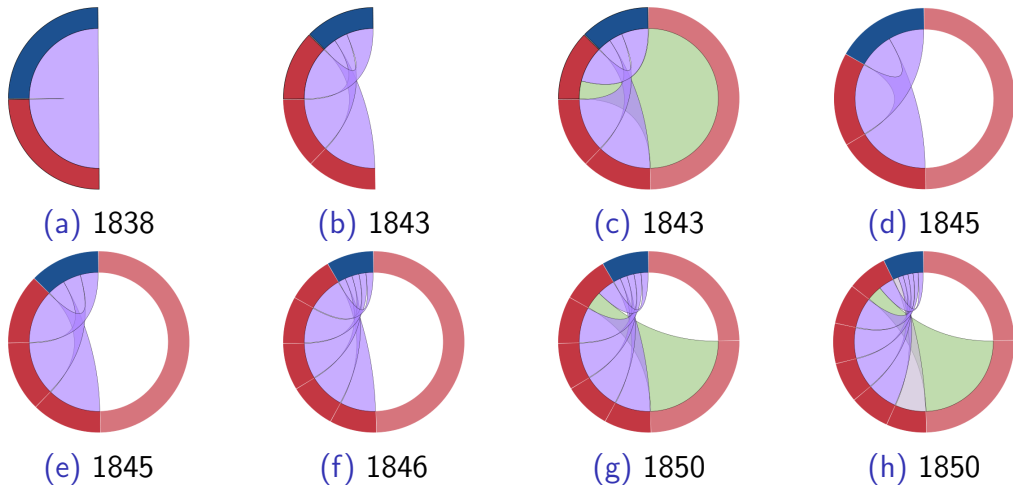
(e) 1845 (f) 1846 (g) 1850 (h) 1850

Figure: Willard Richards' marriages across time ▸ Live demo   ▸ Back