What is DIGITAL HUMANITIES? And what can we do with it? Presented by George Goce Mitrevski Professor Emeritus.Auburn University,AL USA

What is **DIGITAL HUMANITIES**?

- Collection of practices and approaches combining computational methods with humanistic inquiry.
- Explore the possibilities for digital tools for humanistic research.
- Enhance scholarship in the humanities.
- Digital tools to analyze large quantities of data in new ways.
- Greater maneuverability within large amounts of data.
- Fostering meaningful collaboration

What is DIGITAL HUMANITIES?

- Digital tools enable us to push the boundaries of humanistic research.
- Digital approaches relevant to a wide range of disciplines.
- Projects that enable us to analyze, visualize, or simulate interesting problems in the humanities.
- Teaching and dissemination

Digitization and Archives

- Sources of digital data
 - Libraries.
 - Museums.
 - Universities.
 - Government institutions.
 - Community organizations.
- Non-digital data
 - How to locate it and collect it?
 - How to convert it into digital format?

Digital Tools

- Digital humanities tools needed for:
 - Digitization and archiving.
 - Text mining, retrieval and analysis.
 - Information extraction of non-textual data.
 - Geo-tagging.
 - Visualization.
 - Online publishing. Information sharing.
 - Digital curation.

Metadata and Text Markup

- Metadata comprises the "data about data".
- Most crucial step in making material findable and usable by humanities scholars.
- Information associated with archival material:
 - Key attributes
 - Author, date, publisher
- Metadata and markup standards:TEI, Dublin Core, etc.



Text Retrieval

- How to find needed information from a large body of textual data on humanistic subjects.
- Ngrams
 - Set of co-occuring words.
 - Compare relative frequencies of word phrases.
- Google Ngram tool: search interface that allows users to track the relative frequency of phrases over hundreds of years and over 5 million digitized books.



Text Retrieval



Text Retrieval

- Topic modeling
 - Tools for extracting topics from texts.
 - Tool looks for patterns in the use of words.
 - List of words that occur in statistically meaningful ways.
 - Text can be any unstructured or unmarked text.
 - Topic tracked across sources and various years.
 - MALLET: tool for statistical natural language processing, document classification, topic modeling, information extraction.

Text Analysis Tools

- Determine the frequency with which words or phrases occur.
- Create concordances.
- View words in context.
- Study patterns in texts.
- Corpus data
- Concordances

Text Analysis Tools

За Македонцките Работи Concordance

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Text Analysis Tools

Macedonian Proverbs. Македонски пословици

| Ноте - Дома | Submit - Барај <u>Help - Помош</u> | |
|--|------------------------------------|-----|
| Found 96 proverbs with "магаре". Најдени се 96 пословици со "магаре" | | |
| Proverb - Пословица | ID - Б | poj |
| Ако бидиш магаре, секој ќе те вјат. | | 12 |
| Брезо магаре не е едно. | 2 | 281 |
| Врба дрео, зет фара и магаре стока не се. | 4 | 06 |
| Грешит поп во книга, а не магаре во нива. | 5 | 572 |
| Да ме клоцнит ат, се јајт некако, ама да ме клоцнит красто м | агаре, со нишчо не се јајт. 🤅 🤅 | 518 |
| Да му речет: "Летат магаре", тој ќе излезит да го видит. | e | 526 |
| Да те клоцнит ат, се јајт некако, ама магаре да те клоцнит, бо | олит. 6 | 549 |
| Дељми си магаре, самари ќе се нает. | 7 | /01 |
| Едно магаре брезо не е. | 8 | 353 |
| Едно магаре вода не знъјт да напијат. | 8 | 354 |
| За магаре сено, та за него збор. | 9 | 72 |
| За тебе збор, за магаре оро. | 9 | 91 |
| Зет фара, врба дрео и магаре стока не се. | 10 |)65 |
| Ко магаре меѓу пастујте. | 14 | 77 |
| Кој вјат магаре, ќе му го мирисат прдежот. | 15 | 65 |
| Кој вјат магаре, ќе му го слушат рикањето. | 15 | 66 |
| Куцат магаре од уше. | 18 | 304 |
| Магаре вјај, магаре барај. | 19 | 01 |
| | | |

Spatial Analysis

- Geographic Information Systems
- Create multiple layers of information that can be aligned on the same map.
- Scanning and geo-referencing of historical maps.
- Combine and overlay various forms of information to understand how they relate to one another.
- Google Earth. Plot series of points.
- What kind of patterns could be revealed for humanities scholars?

Spatial Analysis

- Trace movements in historical battlefields.
- Major plot developments in historical novels.
- Digital cameras and geo-tagging add location information to each photo.
- Interactive maps conveying existing social patterns migrations, etc.

Digital Anthropology

- Sociometrics. Using digital artifacts to better observe and measure the complex reality of human systems.
- Statistical analysis of social phenomena.
- Capturing detailed data on human networks.
- Study of origin, behavior and cultural development of humans and organizations.
- Levels of analysis region, city, neighborhood, social group.

Digital History

- Finding and digitizing historical material for access.
- Developing skills appropriate and necessary for conducting research in the digital age.
- Building digital maps and visualizations.
- Building a digital archive around a theme
- Design, write and create digital exhibits.

Oral Histories

- Digital forum and collection of stories of members of a community or social group.
- Collection of stories of individuals through photography, interviews, videos.
- Digital archives that chronicle the experiences of individuals – war veterans, immigrants, etc.

Croudsourcing

- Outsourcing data gathering to a group of people who enjoy engaging with their content and tasks.
- Using cognitive surplus: 'the spare processing power of millions of human brains'.
- Harnessing the crowd to tackle big data challenge.
- Human intelligence is massively distributed and readily accessible.

Croudsourcing

- Help scholars and organizations connect with audiences.
- Mutually beneficial activities: collecting, digitization, description undertaken by distributed participants.
- Empowers communities to make their own history.

Collection Building: Omeka

- Web platform for collections and exhibitions online.
- Designed for scholars, cultural organizations, enthusiasts, educators.
- Create, share, display digitized cultural heritage materials: images, documents, narratives, and commentary.
- Showcase students' work.
- Ideal for students to learn how to do metadata descriptions.

Collection Building: Omeka

- Typical student research papers disappear at the end of a semester.
- Students' Omeka projects live on, evidence of their research, writing, analytical, technical, and organizational skills.
- Transcribe at the Library of Virginia.
 Participants transcribe hand written historical documents.



Collaboration





Collaboration

 Digital humanities promotes meaningful interaction and collaboration among students, professors and the surrounding community.

THE END Thank you.