

Dualities of the Digital: Theorizing the Practical Realities of Digital Curation

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Digital collections rest on binary foundations. All digital objects and associated metadata are composed entirely of binary values (bits). Technologies to manage and use digital objects can only perform actions that are reducible to binary values. But archival work involves continuous grappling with dualities. According to Lave Wenger, a duality is "a single conceptual unit that is formed by two inseparable and mutually constitutive elements whose inherent tensions and complementarity give the concept richness and dynamism."

Examples of digital curation dualities include:

- Capturing the state of a target entity at a given time or recording changes of its state over time
- Retaining state information directly or retain the ability to generate similar states over time
- Reflect affordances of current interaction contexts (more easily usable in the present) or previous interaction contexts (more fidelity to the original use environment)
- Single point of strength or multiple points of failure
- Tight or loose coupling
- Embedded curation or transfer of custody
- Preserve what gets highest social attention or that which is marginalized
- Internal complexity (within objects) or external complexity (pushed into the system)
- Exploring (pursue new directions) or exploiting (build on successes)
- Just-in-time or just-in-case (e.g., description, preservation actions)
- Optimization or robustness
- Community capacity building or service provision

Resources are limited, and digital curation professionals cannot pursue all objectives equally. However, rather than simply picking one side of a duality, digital curation professionals must often pursue them simultaneously to varying degrees while ensuring a certain threshold level of commitment to each, finding what Paul Evans and Yves Doz call the "zone of complementarity." The proper balance depends on a variety of contextual factors that evolve over time. The dualities of digital curation provide a powerful way to strategize complex, often messy human activities that must be enacted through entirely binary representations.

About the author:

Christopher (Cal) Lee is Professor at the School of Information and Library Science at the University of North Carolina, Chapel Hill. He teaches courses and workshops in archives and records management; understanding information technology for managing digital collections; digital curation workflows and information ethics. His primary research focus is the long-term curation of digital collections. He's passionate about enabling information professionals and other stakeholders to successfully implement and sustain new digital curation practices. Cal developed "A Framework for Contextual Information in Digital Collections," and edited and provided several chapters to *I, Digital: Personal Collections in the Digital Era*. He has served as

Principal Investigator of the Digital Acquisition Learning Laboratory (DALL), BitCurator, BitCurator Access, BitCurator NLP, BitCuratorEdu, and Review, Appraisal and Triage of Mail (RATOM) projects. He has been Co-PI on OSSArcFlow, as well as several projects focused on digital curation education: DigCCurr, DigCCurr 2, Closing the Digital Curation Gap (CDCG), Educating Stewards of Public Information in the 21st Century (ESOPI-21), and Educating Stewards of Public Information Infrastructure (ESOPI2). Cal was also Senior Personnel on the DataNet Federation Consortium funded by the National Science Foundation (NSF) and is currently PI on Computer-Assisted Redaction and Anonymization of Scholarly Communications and Products (CARASCAP) funded by the NSF. He is a Fellow of the Society of American Archivists, and he served as editor of American Archivist (2018-2020).