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**Citation:** Bawden, D., Robinson, L., Pinfield, S. & Wakeling, S. (2019). Open Access in Theory and Practice: workshop. Paper presented at the Conceptions of Library and Information Science (CoLIS), 16-19 June, Ljubljana, Slovenia.

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# OA TAP: Open Access in Theory and Practice Workshop

David Bawden, Stephen Pinfield,  
Lyn Robinson & Simon Wakeling

# OA TAP: Open Access in Theory and Practice – Project Overview

# Project purpose

This research project focuses on **two phenomena and explore the relationship** between them:

- a. **Open-access (OA)** publishing and dissemination of research outputs as part of scholarly communication; and
- b. The interactions of **theory and practice** (and, theorists and practitioners), in the Social Sciences and Humanities (SSH) in general and in Library and Information Science (LIS) in particular.

# ‘Open access’: definition

“...digital, online, free of charge, and free of most copyright and licensing restrictions”

(Suber, 2012)

# Research questions

The project is addressing the following overarching research question:

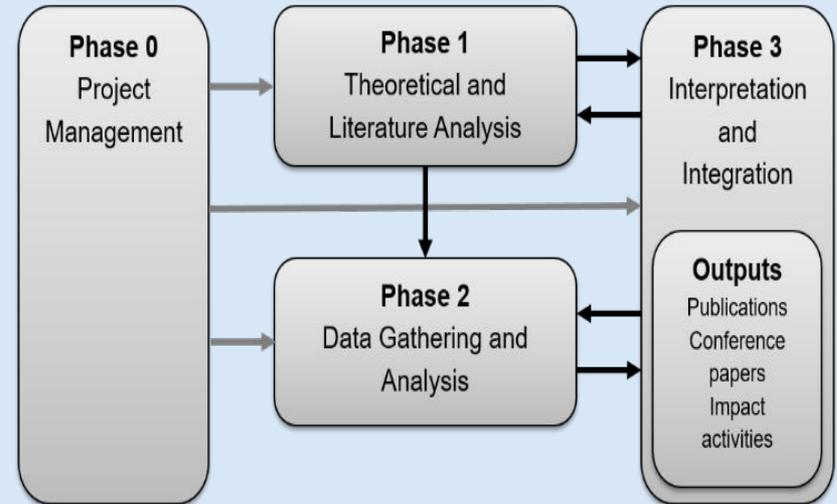
- In what ways and to what extent have theory and practice interacted in the development of open-access approaches to publishing and dissemination of research outputs, and what does this reveal about the nature of the open-access phenomenon and the relationship between theory and practice?

In order to approach this main research question, the following sub-questions are being addressed:

1. How has existing theory been used, or new theory developed, in relation to the phenomenon of open access?
2. To what extent have practitioners (including policymakers, information professionals, publishers and others involved in implementing OA) been influenced by or have themselves influenced theoretically-informed accounts of OA in their attitudes, policies or activities relating to OA development and implementation?
3. What is the nature, purpose and role of theory as perceived by researchers (particularly those who have incorporated theory into their research or generated theory as part of their research on OA), practitioners and policymakers (involved in implementing OA)?
4. What does the (perceived) relationship between theory and practice tell us about OA as a phenomenon and movement?
5. What does it tell us about the relationship between theory and practice in general, for LIS in particular and SSH more widely?

# Project structure

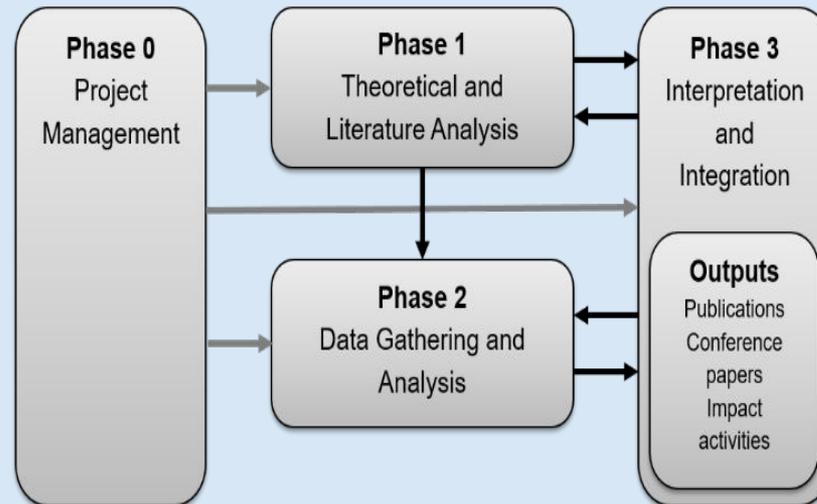
- **Phase 1:** Review of relevant work in the peer-reviewed, professional, grey and 'informal' (social media, etc) literatures, and production of a typology of theory generation and use associated with OA



- **Phase 2:** Interviews with researchers and practitioners (including Librarians, OA service providers (e.g. repository managers), policymakers/funders, research managers, consultants and publishers), including second interviews with a sample of practitioners.
- **Phase 3:** Integration of findings and reporting of results, focusing on RQs and emergent issues.

# Project structure

In what ways and to what extent have theory and practice interacted in the development of open-access approaches to publishing and dissemination of research outputs, and what does this reveal about the nature of the open-access phenomenon and the relationship between theory and practice?



Which aspects of this project are you most interested in?



How is this research relevant to your work?

# Open Access in Theory and Practice

## Phase 1: Literature Review

# Purpose

- “A thorough literature review designed to identify relevant studies which have developed and/or used theory to discuss OA” (Project plan)
- Sought to investigate:
  - Which different theories are used to investigate OA?
  - Why are they used?
  - How are they used?
  - What aspects of OA do they cover?
  - What type of theories are generated by research into OA?

# Scope and method

- Journal articles and book chapters
  - Found through systematic searches of *Scopus* and *Google Scholar*
- Grey literature
  - Reviewed the publications of 35 organisations known to be active in OA research or practice
- Books
  - List of 15 books based on our own knowledge and experience

# Definition of 'theory'

It is a **generalisation, representation, or abstraction** which attempts to **explain or represent** a particular **context or 'reality'**, enabling one or more of **analysis, explanation, or prediction**. It can be presented in a **number of forms**, including text (such as a set of propositions), visualisations (such as a diagram), or mathematical symbols (such as a formula), or a combination of more than one of these, but is normally **explicitly stated or presented**, and commonly labelled as a **model, framework or conceptual map**.

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Is this a useful definition?  
Does it miss anything?



# Coding (1)

General information			
Elements	Description	Codes	Source
OA sub-field	Which specific aspect(s) of OA the document relates to	<ol style="list-style-type: none"> <li>1. OA as concept</li> <li>2. Research and researchers</li> <li>3. Policy</li> <li>4. Repositories</li> <li>5. Journals</li> <li>6. Institutions</li> <li>7. Impact</li> </ol>	Pinfield (2015)
Author role(s)	The professional role of author(s) of the document	<ol style="list-style-type: none"> <li>1. Academic</li> <li>2. Librarian</li> <li>3. Publisher</li> <li>4. Other</li> </ol>	Developed for this project
Type of research	The type of research presented in the document	<ol style="list-style-type: none"> <li>1. Quantitative</li> <li>2. Qualitative</li> <li>3. Mixed methods</li> <li>4. Review</li> <li>5. Essay/opinion</li> <li>6. Method paper</li> <li>7. Prototype/exemplar</li> </ol>	Developed for this project

# Coding (2)

<b>Use of existing theory</b>			
Theory/theories used	The name of any theory or theories used in the paper	-	-
How is theory used?	The way(s) in which theory is utilised in the document.	<ol style="list-style-type: none"> <li>1. cursory reference to theory</li> <li>2. Theory used to provide background or context</li> <li>3. Theory used to inform the research method</li> <li>4. Theory used to inform analysis/discussion/conclusions</li> <li>5. Theory used to generate predictions</li> </ol>	Developed for this project
How is use of theory is described?	Language used by the author(s) to describe how theory is used	Snippet(s) of text that describes theory use recorded.	-
<b>Theory generation</b>			
Gregor type	If theory is generated, to which of Gregor's types it corresponds	<ol style="list-style-type: none"> <li>1. Theory for analysing</li> <li>2. Theory for explaining</li> <li>3. Theory for predicting</li> <li>4. Theory for both explaining and predicting</li> <li>5. Theory for design and action</li> </ol>	Gregor (2006)
Reynolds type	If theory is generated, to which of Reynolds's types it corresponds	<ol style="list-style-type: none"> <li>1. A set of laws, i.e., well-supported empirical generalizations</li> <li>2. An inter-related set of definitions, axioms and propositions</li> <li>3. Descriptions of causal processes</li> <li>4. Vague concepts, untested hypotheses, prescriptions for good behavior.</li> </ol>	Reynolds (1971)
Language used to describe theory	Language used by the author(s) to describe their theory	Snippet(s) of text that introduced the new theory recorded.	

Theory generation			
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Are the Gregor and Reynolds typologies helpful in understanding theory generation?

Do the typologies reflect the use of theory in LIS?



# Use of Theory

# Overview

<b>Articles/conference proceedings/book chapters (152)</b>			
	Uses theory	Does not use theory	Total
<b>Generates theory</b>	33	32	65
<b>Does not generate theory</b>	87	-	87
<b>Total</b>	120	32	152
<b>Reports (19)</b>			
	Uses theory	Does not use theory	Total
<b>Generates theory</b>	10	5	15
<b>Does not generate theory</b>	4	-	4
<b>Total</b>	14	5	19
<b>Books/monographs (8)</b>			
	Uses theory	Does not use theory	Total
<b>Generates theory</b>	1	0	1
<b>Does not generate theory</b>	7	-	7
<b>Total</b>	8	0	8

# OA Topics

<b>OA sub-field</b>	<b>Articles/conference proceedings/book chapters (152)</b>	<b>Reports (19)</b>	<b>Books / monographs (8)</b>
<b>Journals</b>	66	15	1
<b>Research and researchers</b>	63	9	4
<b>Repositories</b>	61	4	3
<b>OA as concept</b>	59	2	7
<b>Policy</b>	24	14	2
<b>Institutions</b>	14	15	1
<b>Impact</b>	11	0	2

# Most commonly used theories

Theory	Articles/ conference proceedings/book chapters (152)	Reports (19)	Books (8)
Innovation Diffusion Theory	16	0	1
Solow-Swan Model	8	6	0
Unified Theory of Acceptance and Use of Technology (UTAUT)	11	0	0
Scholarly communication life-cycle model	5	5	0
Disruptive Innovation	10	0	0
Game Theory	6	0	0
Critical Theory	6	0	3
Actor Network Theory	5	0	0
Social Exchange Theory	5	0	0
Socio-Technical Interaction Network	4	1	0
Theory of Reasoned Action	4	0	0
Theory of Planned Behaviour	3	0	0
Academic Tribes	3	0	0
Commons Theory	1	0	2

Theory	Articles/ conference proceedings/book chapters (152)	Reports (19)	Books (8)
Innovation Diffusion Theory	16	0	1
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Disruptive Innovation	10	0	0
Game Theory	6	0	0
Critical Theory	6	0	3
Actor Network Theory	5	0	0
Social Exchange Theory	5	0	0
Socio-Technical Interaction Network	4	1	0
Theory of Reasoned Action	4	0	0
Theory of Planned Behaviour	3	0	0
Academic Tribes	3	0	0
Commons Theory	1	0	2

Is there anything surprising about this list of theories?



Are there any theories you would expect to see here, that aren't?

# Thoughts about theories used

- Diversity...
  - Of academic field (Sociology, Psychology, LIS, Mathematics, Education, Economics and Business)
  - Of scope (individuals, systems, society)
  - Of purpose (understanding, explanation, prediction)
- Infrequent use of quantitative theories
- Significant use of *discipline specific theories*
- Variation in level of cross-citation

# Accessibility

The tree of the open access quantum game is displayed in Fig. 2. After the two players have chosen their individual quantum strategies ( $\widehat{W}_A = \widehat{W}(\theta_A, \phi_A)$  and  $\widehat{W}_B = \widehat{W}(\theta_B, \phi_B)$ ) the disentangling operator  $\widehat{F}^\dagger$  is acting to prepare the measurement of the scientists' state. The entangling and disentangling operator ( $\widehat{F}, \widehat{F}^\dagger$ ; with  $\widehat{F} = \widehat{F}^\dagger$ ) is depending on one additional single parameter  $\gamma$  which is a measure of the entanglement of the system.

$$\widehat{F} = \sigma_x^{\otimes 2}(\cos\gamma), \quad \gamma \in [0, \frac{\pi}{2}]. \quad (5)$$

The final state prior to detection therefore can be formulated as follows:

$$|\psi_f\rangle = \widehat{F}^\dagger(\widehat{W}_A \otimes \widehat{W}_B)\widehat{F}|00\rangle. \quad (6)$$

The expected payoff of the two scientists within the quantum version of the open access game depends on the payoff matrix (see Table 1) and on the joint probability to observe the four possible outcomes of the game.

$$\mathbb{E}_A = (r + \delta)P_{00} + (r - \alpha)P_{01} + (r + \beta)P_{10} + rP_{11},$$

$$\mathbb{E}_B = (r + \delta)P_{00} + (r - \beta)P_{01} + (r - \alpha)P_{10} + rP_{11} \quad \text{with: } P_{\sigma\sigma'} = |\langle \sigma\sigma' | \psi_f \rangle|^2, \\ \sigma, \sigma' = \{0, 1\}.$$

To visualize the payoffs in a three-dimensional diagram it is necessary to reduce the set of parameters in the final state:  $|\psi_f\rangle = |\psi_f(\theta_A, \varphi_A, \theta_B, \phi_B)\rangle \rightarrow |\psi_f(t_A, t_B)\rangle$ . We have used the same specific parameterization as Eisert et al. [20], where the two strategy angles  $\theta$  and  $\phi$  depend only on a single parameter  $t \in [-1, 1]$ . In our model  $t_A, t_B = 1$  corresponds to strategy  $\alpha$ , and  $t_A, t_B = 0$  corresponds to strategy  $\alpha$ . Negative  $t$ -values correspond to quantum strategies, where  $\phi > 0$ .

Hanuske, M., Bernius, S., & Dugall, B. (2007). Quantum Game Theory and Open Access Publishing. *Physica A: Statistical Mechanics and Its Applications*, 382(2), 650–664.

The paper applies quantum game theory to the question of researchers' choice of publication venue

# Accessibility

The perspective of radical interactionism (Athens, 2015) helps attune us to the fact that open access editors experience asymmetric relations of power in their scholarly fields. Such fields favor those who adhere to traditional publication routes and, especially, those who control the major mainstream publications. Open access editors experience these fields of power in a very direct way, and orient their actions accordingly. They attempt to bring justice to fields of academic publishing by making use of a publically accessible medium, according to emergent norms surrounding open access that continue to evolve. What is considered possible and desirable is itself undergoing a process of negotiation and flux, just what we would expect from emergent processes. The battles narrated in this chapter are happening within a wider institutional and governmental context, in which the rules requiring open access, and the amount libraries will continue to pay for subscriptions, is far from settled.

Clearly, power is an important part of this story, and a radical interactionist approach helps focus our attention to the meanings of resistance in relation to the external forces of power that actors on the ground envision and actively strategize against. Yet we believe that resistance as a sociological concept also requires the notion of emergence (Chang, 2004; Mead, 1938). Without the continual and creative reassembly of human and nonhuman worlds, and technological and social systems (Latour, 2005), new forms of resistance could not be generated in the first place, nor would the extended forms of rationality they make possible. By carefully considering how the unexpected interaction of emergent social forms provides new opportunities for resistance in particular sites of struggle, interactionist studies of power may yield even greater insights into the dynamics of oppression and resistance.

Price, T., & Puddephatt, A. (2017). Power, emergence, and the meanings of resistance: Open access scholarly publishing in Canada. *Studies in Symbolic Interaction*. Department of Sociology, Lakehead University, Thunder Bay, Canada.

The paper “explores the meanings of resistance held by the editors of open access journals in the social sciences and humanities in Canada, as well as the views of university librarians”

# Accessibility

The tree of the open access quantum game is displayed in Fig. 2. After the two players have chosen their individual quantum strategies ( $\hat{U}_A = \hat{U}(\theta_A, \phi_A)$  and  $\hat{U}_B = \hat{U}(\theta_B, \phi_B)$ ) the disentangling operator  $\hat{F}^{-1}$  is acting to prepare the measurement of the scientists' state. The entangling and disentangling operator ( $\hat{F}, \hat{F}^{-1}$ ; with  $\hat{F} = \hat{F}^{-1}$ ) is depending on one additional single parameter  $\gamma$  which is a measure of the entanglement of the system.

$$\hat{F} = e^{i\frac{\gamma}{2}(\sigma_A^x \otimes \sigma_B^x)}, \quad \gamma \in [0, \frac{\pi}{2}]. \quad (5)$$

The final state prior to detection therefore can be formulated as follows:

$$|\Psi_f\rangle = \hat{F}^{-1}(\hat{U}_A \otimes \hat{U}_B)\hat{F}|00\rangle. \quad (6)$$

The expected payoff of the two scientists within the quantum version of the open access game depends on the payoff matrix (see Table 1) and on the joint probability to observe the four possible outcomes of the game.

$$\$_A = (r + \delta)P_{oo} + (r - \alpha)P_{oa} + (r + \beta)P_{os} + rP_{ee},$$

$$\$_B = (r + \delta)P_{oo} + (r - \beta)P_{oe} + (r - \alpha)P_{os} + rP_{ee} \quad \text{with: } P_{\sigma\sigma'} = |\langle\sigma\sigma'|\Psi_f\rangle|^2, \\ \sigma, \sigma' = \{o, a\}.$$

To visualize the payoffs in a three-dimensional diagram it is necessary to reduce the set of parameters in the final state:  $|\Psi_f\rangle = |\Psi_f(\theta_A, \varphi_A, \theta_B, \varphi_B)\rangle \rightarrow |\Psi_f(t_A, t_B)\rangle$ . We have used the same specific parameterization as Eisert et al. [20], where the two strategy angles  $\theta$  and  $\phi$  depend only on a single parameter  $t \in [-1, 1]$ . In our model  $t_A, t_B = 1$  corresponds to strategy  $a$ , and  $t_A, t_B = 0$  corresponds to strategy  $o$ . Negative  $t$ -values correspond to quantum strategies, where  $\phi > 0$ .

The perspective of radical interactionism (Athens, 2015) helps attune us to the fact that open access editors

experience asymmetric relations of power in their scholarly fields. Such fields favor those who adhere to traditional publication routes and, especially, those who control the major mainstream publications. Open access editors experience these fields of power in a very direct way, and orient their actions accordingly. They attempt to bring justice to fields of academic publishing by making use of a publicly accessible medium, according to emergent norms surrounding open access that continue to evolve. What is considered possible and desirable is itself undergoing a process of negotiation and flux, just what we would expect from emergent processes. The battles narrated in this chapter are happening within a wider institutional and governmental context, in which the rules requiring open access, and the amount libraries will continue to pay for subscriptions, is far from settled.

Clearly, power is an important part of this story, and a radical interactionist approach helps focus our attention to the meanings of resistance in relation to the external forces of power that actors on the ground envision and actively strategize against. Yet we believe that resistance as a sociological concept also requires the notion of emergence (Chang, 2004; Mead, 1938). Without the continual and creative reassembly of human and nonhuman worlds, and technological and social systems (Latour, 2005), new forms of resistance could not be generated in the first place, nor would the extended forms of rationality they make possible. By carefully considering how the unexpected interaction of emergent social forms provides new opportunities for resistance in particular sites of struggle, interactionist studies of power may yield even greater insights into the dynamics of oppression and resistance.

To what extent do these papers, written as they are, effectively add to the general body of knowledge about OA?

What do they tell us about a theory practice gap?



# How theory is used

	Articles/conference proceedings/book chapters (152)	Reports (19)	Books (8)
Cursory reference	26	2	0
For background/context	41	10	5
Informs method	56	6	1
Informs analysis/discussion	90	5	5
To generate predictions	11	4	0

# Theory generation

# Language and terminology

There is clear variation in the use and application of labels relating to theory generation:

Label	Examples
<b>Model</b>	“research model”, “conceptual model”, “conceptual research model”, “business model”, “theoretical model”, “cost-benefit-model”, “process model”, “network model”, “mental model”, “structural model”, “regression model”, “theoretical model”, “synthesized model”, “landscape model”, “management model”, “simulation model”, “contest-model”, “economic model”, “cost-benefit model”, “evaluation model”, “working model”, “cooperative model”, “research model”
<b>Framework</b>	“impacts framework”, “theoretical framework”, “evaluation framework”, “best practices framework”, “usability framework”, “conceptual framework”, “integrated framework”
<b>Theory</b>	None!

More often used by practitioners:

- Guidelines
- Checklist
- Toolkit
- Route Map

# Language and terminology

- Use of the terms “theory” and “theoretical”
  - “This paper aims to test a theory that transforming metadata schemas in institutional repositories will lead to increased indexing by Google Scholar” (Arlitsch & O’Brien, 2012)
    - “Theory” here used essentially to mean a hypothesis
  - “This paper aims to theorize the defining features of open publishing innovations and their impact on future digital scholarship” (Ren, 2013)
    - But paper contains no theory (used or generated) – might better be described as a review
  - “We provide theory and evidence suggesting that authors of higher quality papers are more likely to choose open access in hybrid journals which offer an open access option” (Gaulé & Maystre, 2011)
    - “Theory” here describes a proposed model to explain variation in OA citation rates, then empirically tested.

What rationale do academics have for using certain terms?



Is inconsistency of terminology a barrier to practitioners?

To what extent do outputs termed “models” or “frameworks” differ from those termed “guidelines”, “toolkits” etc?

And if they don't differ, are they **perceived** differently?

# Type of theory generated

- Tend to be of the most limited types – either what Reynold’s terms “vague concepts, untested hypotheses, prescriptions for good behaviour”, or Gregor’s “theory for analysing”.
- No examples of what we might term “grand” theories (Gregor’s “theory for explaining and predicting”, and Reynolds’ “set of laws”).
- But this is only a partial picture...

# Typology of theories generated in relation to OA

- **Theory for evaluation and development (11 examples)**

- Provides a formal structure for the evaluation and/or development of a system or process. The theory is typically suitable for application in a localised context.

- **Theory of attitudes, relationships and processes (30 examples)**

- Provides an analysis or explanation of the attitude of actors, and/or the relationships between actors, or maps the processes with which they engage

- **Theory of systems (18 examples)**

- Addresses a system as a whole (e.g. the scholarly communications system) and proposes or defines models for that system

- **Theory as method (24 examples)**

- Developed as a tool to facilitate investigation. Includes instances of existing theory being significantly adapted for this purpose.

# Typology of theories generated in relation to OA

- **Theory for evaluation and development (11 examples)**
- **Theory of attitudes, relationships and processes (30 examples)**
- **Theory of systems (18 examples)**
- **Theory as method (24 examples)**

How useful is this typology?

Are some types likely to be more useful to practitioners?

Are such types likely to apply to other topics in LIS research?



# Typology of theories generated in relation to OA

## • **Theory for evaluation and development**

- Theory provides a formal structure for the evaluation and/or development of a system or process. The theory is typically suitable for application in a localised context.
- e.g. Campbell-Meier, J. (2011). A framework for institutional repository development. *Advances in Library Administration and Organization*.

# Typology of theories generated in relation to OA

- **Theory of attitudes, relationships and processes**

- Theory provides an analysis or explanation of the attitude of actors, and/or the relationships between actors, or maps the processes with which they engage
- e.g. Kim, J. (2007). Motivating and impeding factors affecting faculty contribution to institutional repositories. *Journal of Digital Information*, 8(2).

# Typology of theories generated in relation to OA

## •Theory of systems

- Theory addresses a system as a whole (e.g. the scholarly communications system) and proposes or defines models for that system
- e.g. Quirós, J. L. G., & Gherab, K. (2009). Arguments for an open model of e-science. *The future of the academic journal*. Oxford: Chandos, 63.

# Typology of theories generated in relation to OA

## •Theory as method

- Theory developed as a tool to facilitate investigation. Includes instances of existing theory being significantly adapted for this purpose.
- e.g. Houghton, J. W. (2011). The costs and potential benefits of alternative scholarly publishing models. *Information Research*, 16(1).

# Conclusions

- There is a significant amount of research relating to OA that uses and / or generates theory
- Theory is most often used in discussion sections to aid explanation or understanding
- Quantitative theories tend to be used to inform method
- Academics from non LIS disciplines have used their own theoretical lenses to address OA questions, but is this work accessible?
- Theory generated in relation to OA tends not to be grand in scope

# Open Access in Theory and Practice

## Phase 2: Interviews

# Purpose

- Researchers were consulted about the role they believe theory has and how it relates to practice. Practitioners were also consulted about their attitudes to theory (positive and negative) in the OA context
- Sought to investigate:
  - What is the nature, purpose and role of theory in relation to OA?
  - Does theoretically informed work influence practitioners, and if so, how?
  - Is there a theory / practice divide?
  - What does the (perceived) relationship between theory and practice tell us about OA as a phenomenon and movement?

# Participants

<b>Researcher</b>	12
<b>Practitioner</b>	24
Consultant	2
Librarian	9
OA provider	3
Policy maker	3
Publisher	7
<b>Total</b>	36

- 41 individuals invited (5 declined)
- Most participants based in UK (19) or N. America (8)
  - But Europe, Australia, South America and Asia also covered

# Micro Survey

## 3. To what extent do you agree or disagree with the following statements \*

	Strongly Agree										Strongly Disagree
Theory has been important in my understanding of open access	<input type="radio"/>										
Theory generated by academic research is often useful for my practice	<input type="radio"/>										
The way in which I use theory in producing research is of relevance to practitioners	<input type="radio"/>										
All academic research should have a strong theoretical basis	<input type="radio"/>										
In my experience, the relationship between theory and practice is usually harmonious	<input type="radio"/>										

# Interview questions

The interviews covered three main areas:

1. Background
  - Participants' roles and experience with OA
  - How they keep abreast of developments in the field
  - The extent to which they make use of the academic literature
2. Views on theory
  - What they understood the term “theory” to mean
  - The relationship between theory and academic research in general
  - The role theory has played in their understanding of OA
  - Their experience using or generating theory
3. The theory practice relationship
  - The extent to which theory informed their practical work
  - The broader relationship between theory and practice
  - How the theory practice relationship could be improved

# Analysis

- Interviews were recorded, and later transcribed
- Thematic analysis was used to identify and structure themes, and create a code book. Transcripts were coded using NVivo software
  - c. 38 hours of audio recording
  - 298,000 words in transcripts
  - 139 unique codes in code book
  - 1,437 passages coded

# Results

# Keeping up to date with OA

*I'm overwhelmed by it, the number of things ... you just can't keep up with everything (R6)*

*Yes, it has to be Twitter. Everything is going on everywhere in so many different spaces. Publishers, libraries, researchers; there's no comparable medium where you can get access to the thoughts of all those people in one place. (Po3)*

*Communicating with individuals is usually what gets you more insight (Pu2)*

# The role of the academic literature

*As a researcher, I tend to pull from the published literature over what's going on on the ground (R5)*

*I think any vigorously conducted study in OA highlights a lot of interesting insights. And I think often also bring a more sane element to the debate. (Pu2)*

*When I say I am using academic research, I could take a headline from a news service that's quoting from an article extract and use that as my data point. (Pu5)*

*There's a certain point at which I tend to stop reading because my focus at the moment is on trying to make practical change. (Pr2)*

# What theory is

*Now I've retired, I could probably tell you I don't know what theory is. I honestly don't know what theory is. Twenty years of being a professor wasn't enough. I don't know (R7)*

*So I assumed it would be, I was taking it to mean, how can I express this, that there was like, you know, someone had, like in any sort of science experiment, sort of like a hypothesis to the experiment, and like theorise that this would lead to this. (Po2)*

# What theory is

- Theory as Hypothesis

- *So in constructing a theory a researcher, or a team is perhaps creating a model to test, or perhaps positing something that's new and hasn't been tested in the literature, in the scientific discourse at all in the past, for subsequent evaluation and testing (Pu6)*

- Theory as Principles

- *For me, the theoretical underpinning for open access is actually Budapest. "An old tradition and a new technology have come together". I used to read that at client conferences because it's inspiring stuff (Pr2)*

- Conceptual Theory

- *I guess it's usually some sort of model, or something that's been ... extracted from findings or experiences to turn something specific into something general, that is then in theory applicable more widely or in different contexts. (C2)*

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# Theory as Principles

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*That’s why I used the word movement and ideology because some people just believe it so passionately. It’s effectively a faith and I think that treating it as a faith does it a disservice (Pu5)*

# Conceptual theory

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# What theory is

- Theory as Hypothesis
- Theory as Principles
- Conceptual Theory

What do these different definitions tell us about how theory is understood?



# Working with theory

*I said we have to find a theoretical context for our position ... I realised that in my presentations at international level there was a consensus that we had to find a better future for Open Access from developing regions. But with what theoretical background? So I started doing research in the same ways I do it always (Pr3)*

# What motivates authors to use theory

*Guiding the research in terms of what questions you're asking (Po1)*

*Other people have done the thinking for you to come up with a robust model to guide your thinking (Pr2)*

*It's going to give it more weight with academics who read it (L8)*

*I do find that for me to be acceptable to my colleagues, I have to speak theory most of the time, otherwise I'm not taken seriously, right? (R8)*

Why should researchers use theory?

What motivates your use of theory?



# How theory has been used in relation to OA

*We need more theory, more critical theory of Open Access (Pr3)*

*Where was the theory which actually was able to say, 'we don't believe that publishers will play the game?' (Pr2)*

*I think it's very good that you get these theorists from outside of information science and scholarly communication field, who provide some good theories that can help explain what's happening in this particular field (R1)*

*I'll go 'what tosh', because you are trying to fit it with what you understand (R9)*

*There is a huge disconnect there. That literature just isn't really crossing that chasm (Pu1)*

Are these points applicable to other practical LIS domains?



# Theory and Practice

# Value of Theory to Practice

*It's a shortcut to understanding and to explaining things to other people (C2)*

*I think it gives it more academic credibility when you're then making the case, when you're then trying to use that evidence (L2)*

*Theory can help you understand why something is happening, so you are better able to either change it or make it better (R9)*

*I do love it when I get some theory that makes sense of things for me (L3)*

*That "what was often thought but never so well expressed" thing. You know, where it's sort of there in my mind, but in a, kind of, random inchoate way. And I suppose one of the purposes of theory is to round up these sort of stray ideas (L3)*

# Lack of Value of Theory to Practice

*Is it going to make a difference? Is it going to make a difference in the next two years? Because if it's not going to make a difference in the next two years the situation will have changed. So, longer term grandiose theoretical views about what might come, well, no, what's the next step. (Pr2)*

*A person who knows Foucault could write a great book applying Foucault to what we're doing in the OA movement. In that sense, they could bring theory to this practice and maybe illuminate the practice and show that Foucault actually helps us understand it. But I don't think we need that ... I can tell when I'm reading something that's aimed at action and when it's aimed at understanding. (R11)*

*I spoke to a librarian last week who rejected the idea that theory was kind of relevant, or important. She was clear in arguing that for her now open access is a kind of practical, economic, technical question of how it can be delivered best. And for her it didn't seem as though any of the grander, to use her language, the grander underpinning theoretical stuff really mattered to where she was right now. (R2)*

What is (or should be) the value of theory to practice?



# Practitioner challenges engaging with Theory

*I'm so disconnected from the theory that I don't even know who the researchers are and who's publishing in that space and where the discourse is happening. (Pu1)*

*I just don't think that the channels that I have set up would expose me to that.*

*That's not necessarily a good thing. I'm just saying that's just the way it is (L5)*

*Those authors made no effort to make their work intelligible to people outside their field ... I just found it very hard to understand what they were saying. And I wanted to, because I thought there was some potential for turning their work into practical recommendations ... but in the end, I still couldn't understand those papers. (R11)*

*Sometimes with the more esoteric social science stuff you, think, there's an overhead here to reading this. I'm just going to get frustrated by the end of the first paragraph. Is the reward going to be worth me struggling through this? (Pr2)*

*People can dismiss it as irrelevant. I think it's the relevance that is the challenge (C2).*

# Unconscious use of Theory

*There's nothing so practical as a good theory. Every man who thinks he's just practical actually has a theory. The Keynes thing about every man who thinks he understands economics practically is really the slave of some defunct economist. Every librarian who thinks he understands libraries practically is really the slave of some defunct library theoretician ... Practice just doesn't exist without some idea in the practitioner's mind about what they are doing. We're all driven by unconscious theories, aren't we? (L3)*

# Cultural differences

*You see the problem we have is that you, in Britain, want to solve problems. So, you take one problem, you try to solve it, then you go to the next problem, you try to solve it. What we do on the continent is, first establish a set of principles, and then we fit the problems within the principles. And the theory is that you have a mental framework. (R6)*

*I think our view in the early 2000s was if we build it they will come, this is luminously a good idea, it's clearly better than the method of dissemination of scholarly information that we've got at the moment. We had no idea, we were so innocent ... Because we didn't have a realistic idea of the motivations and constraints that were operating upon the stakeholders, really. (L3)*

Is this a recognisable characterisation?



# Is the theory practice relationship harmonious?

*It's not everywhere with every theoretician and practitioner, but I definitely think that generally speaking there is a gap. I think that it's often seen as the practitioners don't get interested in theory, but it's also that theorists and academics aren't interested in practice. (R9)*

*Some people will say, too much theory. Right. Some would say, not enough theory. Fine. Let them go at each other and in the end history is written by the winners. So the history of open access will recall which group finally took over (R6)*

*There is not a harmonious relationship. People that are actually trying to put this into practice are down in the trenches ... They're just trying to fill the repository. (Pr2)*

*[Theorists] always strike me as being a bit sort of ivory-towerish and have never actually had to run the repositories, really deal with a wide range of researchers from different disciplines in a multi-disciplinary university, do any of these sort of operational kinds of things ... they don't see the day to day obstacles. (L1)*

Have you encountered practitioners who are hostile to theory?



# Bridging Theory and Practice

Do you believe there is a theory  
practice gap?



If so, what can be done to address it?

What do we, as academics, need to focus on?

# Bridging Theory and Practice

- Actions required of academics
  - Engage with practitioners
  - Disseminate in forms other than the journal article
  - Make research outputs more accessible
  - Link theory to the real world
  - Apply the right theory to the right questions
- Actions required of practitioners
  - Notably few suggestions relating just to practitioners!
  - Do more to seek out theoretical work (time constraints acknowledged)
  - Work to develop skills needed to understand theory

# Bridging Theory and Practice

- Actions required of the community
  - Engage in dialogue
  - Attend each other's conferences
  - Co-production of research
  - Foster links between LIS departments and practice
  - Disseminate in forms other than the journal article
  - Role for “boundary spanners”
    - i.e. individuals with the capacity and inclination to act as intermediaries between theory and practice
    - Participants identified themselves or others doing this role
    - Challenges – motivation and incentives

# Bridging Theory and Practice

- Policy changes and institutional support
  - Incentivise academics to spend more time with practitioners
  - Role for funders
- Tools and services
  - Potential for technology to help bridge the gap
  - Publication of lay summaries
  - Creation of fora for communication and collaboration
  - Build networks of academics, practitioners and policy makers

# Final discussion

What are the key actions for research and practice emerging from this work?

