

## Abstracts

### **Jane Anderson**

*Accounts from the Frontier – Cultural Institutions, Commons Politics and the New Resistance:* Cultural institutions like libraries, archives and museums are unlikely sites for battle. Yet over the last five years there has been a steady increase in conflicts over access and control of the enormous collections that relate to and/or document Indigenous peoples. This paper uses case studies from institutions in the US and Australia to explore the changing politics of knowledge sharing that is challenging cultural commons agendas and rationales within these sites. These institutions, as privileged central repositories for the accumulation and circulation of diverse cultural materials, are at the frontline of having to address interests that have historically not been taken into account. This involves confronting the historical circumstances leading to the making of these collections, and mediating the contemporary legacies as Indigenous peoples fight to gain access, to control and to create new conditions for the future circulation of these materials.

### **Yochai Benkler**

*Between Spanish Huertas and the Open Road – A Tale of Two Commons?:* Why are highways, city streets, and sidewalks in almost all cases, in all market economies, managed as open-access commons? Should databases be in the public domain as in the U.S., or subject to some form of copyright-like regime as in Europe? Is there a role for next generation WiFi spectrum commons strategies in the construction of the ubiquitous computing environment, or should we auction off all remaining spectrum in property-like models? These and similar institutional design questions, great and small, require us to have a general understanding of the role commons play in contemporary market economies.

### **Brian Carver**

*MusicBrainz and Its Peers - Comparing Cultural Commons:* In 2011, Jess Hemerly completed a thorough empirical study of MusicBrainz, a metadatabase of structured information about musical releases maintained by a volunteer online community. This paper builds on her research by comparing and contrasting her findings regarding MusicBrainz with the findings of scholars that have studied open source and free software projects and other instances of online peer-production such as Wikipedia. I begin the process of identifying what makes some of these efforts succeed and what may be missing when other similar efforts fail, working towards a theory of successful online peer-produced information commons.

### **Jorge Contreras**

*Constructing the Genome Commons:* The multinational Human Genome Project (HGP) generated vast quantities of data that it released in public databases, creating a global “genome commons.” The genome commons has continued to grow since the completion of the HGP, and today contains genomic data from more than a hundred different species and thousands of different projects. The fact that so much data is, to a large degree, accessible to the public free of charge has been attributed to a set of simple principles agreed by leaders of the scientific

community at a 1996 summit in Bermuda. These “Bermuda Principles” required that all HGP DNA sequence data be released to the public within twenty-four hours after generation. The data release principles agreed in Bermuda contravened the typical practice in the sciences of making experimental data publicly available only *after* publication of the results and analysis by the principal investigators, usually years after its initial generation. The Bermuda participants had numerous motives for adopting this unorthodox “rapid pre-publication data release” approach, including the practical necessity of making data available among collaborators in geographically dispersed laboratories, but also to accelerate the advancement of science and to counteract private efforts to secure patent protection on the human genome. The Bermuda principles continue to shape data release practices of the genomics research community today and have established rapid pre-publication data release as the norm in genomics and related fields of research. However, advances in science and technology, together with increasingly vexatious ethical, legal and technical issues, have complicated the data release landscape. Some have questioned whether rapid pre-publication data release is still necessary, or even appropriate, in today’s environment. Among the factors weighing most heavily against rapid data release is the loss by data generators of any “head start” that they might otherwise have had in analyzing data and receiving credit for (i.e., publishing) the resulting discoveries. The emergence and recognition of these considerations has led to a series of compromises among stakeholder groups involved in the formulation of genomics data release policies. To a large degree, these compromises have resulted in adjustments to the times at which data is released into public databases, or at which it becomes freely usable once released. I term these time-based design features “latencies” and view them as elements of commons “rules in use” within the theoretical Institutional Analysis and Development (IAD) framework pioneered, in this context, by Elinor Ostrom and her colleagues. Employing this framework, I examine how latency variables have shaped the development of the genome commons and ask whether its continued growth, in the face of strongly countervailing policy pressures, would have been feasible without this means of achieving compromise among divergent stakeholder groups.

### **Brigham Daniels**

*Legispedia*: Is drafting legislation sort of like Wikipedia? The first time I thought of this question, it seemed silly, and perhaps it is. However, the silliness of the question began to fade as I recognized the relevance of their shared characteristics. This article argues that, like Wikipedia, open source software, and patent pools, legislation could properly be characterized as a cultural commons, albeit an unusual one. The article applies the cultural commons framework put forward by Madison, Frischmann, and Strandburg to Congress creating legislation. The relatively new cultural commons literature was founded by intellectual property scholars and, up to this point, mainly employed to explain intellectual property-focused communities. By examining legislation, something that seems to fit within the concept of the framework but is far from the intellectual property context, this article hopes to provide us with a unique vantage point within a familiar institutional setting to reexamine the cultural commons framework and test the robustness of the theoretical lens.

**David Fagundes**

*Labor and/as Love – Roller Derby as Constructed Cultural Commons:* This paper examines women’s roller derby through the lens of Frischmann, Madison, and Strandburg’s Constructed Cultural Commons (CCC) framework. Roller derby (in its most recent incarnation, which began in 2001) is an all-women sport that combines serious athletic competition with a distinctive aesthetic that combines punk and camp. Roller derby is not just an athletic diversion for its participants, but a fullblown sub- and counterculture that provides a sense of identity and belonging to its participants. And perhaps most saliently for this paper, roller derby is not a professional sport. No one makes money from any aspect of derby; instead, the sport and its surrounding culture were created and continue to grow thanks to the voluntary effort and inspiration of thousands of the enthusiasts who devote their free time to it. This study of roller derby begins by examining the sport and its surrounding subculture in light of the CCC framework. I ask and answer three descriptive questions: what aspects of roller derby are governed as commons, how are those commons governed, and why are these aspects so governed? The answers to these questions yield insights about what it means to analyze any cultural phenomenon as a CCC. This inquiry suggests that some forms of production produce commons as outputs, rather than just use them as inputs; indicates that the limited-group character of natural resource commons may not translate to the CCC setting; and shows that the choice to govern a resource as a commons can be a decision about how to construct the character of the affected communities rather than just a means of achieving greater efficiency. Finally, the paper reflects on two overarching issues about the project of CCC more generally. First, it posits a taxonomy of commons that subdivides cultural commons into several subtypes, suggesting that there are fundamental differences between cultural commons that are designed for the purpose of profit and those that aren’t. Second, it reflects on the questions that CCC analysis forces us to ask about why people create intangible goods, and conjectures that the answer to this question often confounds traditional welfarist analysis, and frequently can and should be thought of as a labor of love.

**Brett Frischmann/Katherine Strandburg**

*The Rare Diseases Clinical Research Network as a Nested Cultural Commons:* Concerns about the productivity of the pharmaceutical industry, the accessibility of treatment, and the expense of healthcare have led to numerous experiments with “openness” at various stages of research. One issue of particular concern is the difficulty in applying the current “blockbuster drug” model to rare diseases and conditions. The Rare Diseases Clinical Research Network (“RDCRN”) is an attempt by the United States government to overcome some of these difficulties and to foster a collaborative approach to rare disease clinical research and treatment development, essentially by constructing a commons. The basic idea behind the RDCRN is to construct a network of research consortia, with the dual aims of improving understanding of the disorders, improving diagnostics, and developing better treatments for the particular disorders represented by the funded consortia and developing infrastructure and clinical research methodology that may be used more broadly in studying rare diseases. This project will apply the constructed cultural commons framework to study the RDCRN and related patient advocacy groups. In this preliminary report, we begin by focusing on the structure of the RDCRN itself and on two consortia that have been part of the RDCRN since the beginning in 2003 – the Urea

Cycle Disorders Consortium (UCDC) and Angelman, Rett & Prader-Willi Syndromes Consortium (ARPWSC). To date, we have conducted a literature review, using the cultural commons framework to structure our observations, which we present below. Based on what we have observed thus far, we have begun to identify potential hypotheses and questions to investigate as we continue our research into these initial cases by interviewing various participants.

### **Amy Kapczynski**

*Contagion – Between Property and the Commons in the WHO’s Global Influenza Surveillance Network:* A bit of context for the pages that follow: I’m about to undertake some in-depth field research on the scientific network described below. One important dimension of that project will consider what this case study can help us understand about what makes commons-based production of science work and fail, and in particular what happens when commons-based production systems butt up against property-based production systems. Because any conclusions will have to await the interviews and archival research that I’ll be doing, what follows is an attempt to defend this context as an interesting one in which to ask questions about the commons, and to define some of the important questions that we should be asking when studying a science or cultural commons. I also offer some initial thoughts on what the case study might show us, but these are quite provisional. Given the very early stage of the project, I particularly look forward to your reactions.

### **Michael Madison**

*Astrocommons and the Evolving Futures of Scientific Research:* The constructed cultural commons framework is applied to two cases of commons governance. Both are situated in the context of data-intensive science in astronomy and astrophysics. One, the Nearby Supernova Factory, is an interdisciplinary collaboration among several groups of professional scientists. The second, Galaxy Zoo, is a leading example of a citizen science project, in which volunteer non-scientists have been recruited to participate in large-scale data analysis via the Internet. Each project has grappled with the challenges posed by enormous volumes of astronomical data by using adopting a kind of commons, but the particular solutions employed vary, in part to accommodate the different demands of managing professional and volunteer participants in scientific research.

### **Peter Meyer**

*An Inventive Commons – Sources of the Airplane and its Industry:* This is a study of the experimenters, clubs, and publications associated with the gradual invention of airplanes from the 1860s to 1910. A growing number of experimenters worked out how to make fixed-wing aircraft that could be controlled in the air. They connected to one another in clubs and through publications. They created open institutions and an open literature which was put to use in the invention of the airplane and the creation of the associated new industries. These define a commons-space for work they found worthwhile, to cultivate a common opportunity. The experimenters readily shared information in publications and clubs, and by letters and visits. They treated aeronautical patent filings like publications, not like intellectual property. They copied earlier designs in a way that is analogous to advances in open source software now.

**Laura Murray**

*Cultural Labour in a Small City – Motivations, Rewards, and Social Dynamics:* A study of the arts community of a mid-sized city - we asked about motivation, reward, collective practices & norms. We did not find anything resembling formal norms at all, but there is a strong sense of community, and little presence of big money, and this raises the interesting question of the relation of commons to community, place, purpose for creativity etc. -- this may not be a commons but it's not the mainstream market either.

**Tina Piper**

*The Weapon of Knowledge - War as a Constructed Commons:* The exigencies of war, the collectivism it inspired and the training that it afforded men in the military all contributed to a period during and after World War I (WWI) through World War 2 (WW2) when the 'public interest' was imagined and satisfied through creative techniques of intellectual property management in the allied countries. I also investigate the extent to which modern IP practices and institutions evolved from military practices and situate aspects of the history of twentieth century intellectual property law in its military origins. I do this through a study of primary source materials documenting the development of the (Canadian) NRC and the role of its second president, General McNaughton, both a prolific inventor and a decorated military man. In this paper I hope to also explore what it was about war, the structure of the military and social mores at the time that allowed components of the Allied economies in the 10s, 20s and 30s to foster commons based approaches that have served as models (acknowledged or implicit) for some contemporary commons based approaches.

**Charles Schweik**

*Toward the Comparison of Open Source Commons Institutions:* What I report in this paper is some results of a study that we initiated in 2005 in an effort to gain insight into the socio-technical aspects of open source software collaboration. This study took over five years to complete, and involved a team of researchers at the University of Massachusetts, Amherst. The major product of the study is a book-length manuscript (Schweik and English, forthcoming) that summarizes our efforts to capture what was happening in a close approximation to the population of open source. Much of the research prior to this study focused on high-profile open source software cases, such as the Linux operating system. The goal of this study was to get a better understanding of what was happening in the broader population of open source projects, the vast majority of which are small, much less visible projects. The study has two primary goals: (1) to identify factors that appear to affect whether an open source software commons is successful in terms of maintaining ongoing collaboration – or becomes abandoned; and (2) to focus more attention on how open source projects are governed, and to explore methods for the more systematic study of the institutions that govern open source commons.<sup>2</sup> In this paper, I will provide first a few of the findings from #1, and then focus attention on #2 with the goal of creating a dialog in the Cultural Commons Workshop on how we move toward systematic study and articulation of open commons cases.

**Sonali Shah [with Cyrus Mody]**

*Innovation, Social Structure & the Creation of New Industries:* An industry is a set of firms producing products and a market of consumers for those products. Firms and markets are the basic institutions of capitalism, and yet we know little about the emergence of (1) an industry's initial firms and (2) a product's initial market. Using comparative, longitudinal data from probe microscopy and three sports, this paper inductively derives a framework for understanding the social and economic processes that lead to the development of new industries seeded by user innovations. We identify four modes of social, economic, and technological development around each product: innovator, community, network exchange, and industry. Each mode describes a distinct social structure through which producers and users interact. Specifically, we distinguish between who produces and who consumes as the social structure evolves from innovator mode (when the producer and the consumer are the same individual) to industry mode (when firms produce and consumers consume). We describe the individual-level motives that trigger each mode and the social structures that underlie them. The four modes form a temporal sequence in some industries; in others a single mode dominates over time or the modes emerge in a variety of sequences.

**Katherine Strandburg [with Minna Allarakhia]**

*A Cultural Commons Study of New Approaches to Drug Development – Case Studies from the Fight Against Malaria:* The failure of the patent-driven, proprietary approach to drug development to provide treatments for diseases endemic in the developing world has led to a plethora of drug development initiatives involving public, philanthropic, and private entities (and every combination of these types) advertising themselves as “open”, “collaborative,” and so forth. While it is still too early to come to definitive conclusions about the effectiveness of the various efforts, we believe that it is possible and desirable at this point to begin to analyze the structure and governance of these projects. In particular, we suggest that the concept of “openness” in the context of drug discovery and development should be interrogated and refined, so that the institutions now being described as “open” can be distinguished and more clearly analyzed. To delineate a manageable cohort, we consider projects aimed at developing malaria drugs. In this initial paper, we focus on approaches aimed at involving private pharmaceutical companies in tackling neglected diseases. We compare three types of projects aimed at inducing private sector involvement: prizes and related approaches aimed at providing pecuniary incentives for developing drugs for neglected diseases, “public-private partnerships,” and arrangements for providing “open” access to intellectual property. In particular, we embark on a detailed case study, using the constructed cultural commons framework, of the Pool for Open Innovation for Neglected Tropical Diseases (POINTD), since it is the newest and least studied of these projects. The present draft is a work-in-progress based entirely on a literature review and study of publicly available documents. We plan to extend the case study with interviews of POINTD participants.