eXtensible Business Reporting Language (XBRL):
A Note on Need to Study XBRL as A Social Artifact

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XBRL is a language for the electronic communication of business and financial data, which is revolutionizing business reporting around the world. It provides major benefits in the preparation, analysis, and communication of business information. It offers cost savings, greater efficiency and improved accuracy and reliability to all those involved in supplying or using financial data. XBRL is one of a family of extensible markup language (XML) languages, which is becoming a standard means of communicating information between businesses and on the internet. As said, being a member of the family of languages based on XML, which is a standard for the electronic exchange of data between businesses, and on the internet. Under XML, identifying tags are applied to items of data so that they can be processed efficiently by computer software. XBRL is a powerful and flexible version of XML, which has been defined specifically to meet the requirements of business and financial information. It enables unique identifying tags to be applied to items of financial data, such as ‘net profit’. However, these are more than simple identifiers. They provide a range of information about the item, such as whether it is a monetary item, percentage, or fraction. XBRL allows labels in any language to be applied to items, as well as accounting references or other subsidiary information.
Companies can use XBRL to save costs and streamline their processes for collecting and reporting financial information. Consumers of financial data, including investors, analysts, financial institutions and regulators, can receive, find, compare, and analyse data much more rapidly and efficiently if it is in XBRL format. XBRL can handle data in different languages and accounting standards. It can flexibly be adapted to meet different requirements and uses. Data can be transformed into XBRL format by suitable mapping tools or it can be generated in XBRL by appropriate software.

Figure 1 adopted from the recommendations of XBRL working group report depicts taxonomy schema and linkbase drawing conventions for XBRL. Many scholars have attempted to study XBRL from accounting perspective as it helps companies in reporting financial results and users in obtaining such results in further computable manner. However, very few research studies are forthcoming to understand XBRL as a social artifact.

This note takes a foundational step toward a paradigm and suggests how one might usefully augment further studies with research on XBRL as social artifacts. Technological artifacts are physical/material as well as social constructions thus making it plausible to be called social artifacts too. Extensible Business Reporting Language (XBRL) is one such technological artifact functioning as a social construction in the life of an ordinary accountant to a highflying investment banker. The Potential social impact of XBRL is unlike several other closely resembling technological artifacts like object-oriented paradigm in the life cycle of software. Both the function and meaning of technical artifacts are mainly socially constructed. Usually the
function of a technical artifact is taken to determine its use, but in particular, in XBRL a close interrelation between use and meaning can also be observed.

As social artifacts, XBRL possess both technical and symbolic properties. Moreover, the sociological study of XBRL-as-artifact can profitably apply prevailing social scientific theories of technology and symbolism to understand both: (1) the micro dynamics of why and how transacting parties creates individual devices, and (2) the macro dynamics of why and how larger social systems generate and sustain distinctive XBRL regimes. Seen in this light, the micro dynamics of XBRL implicate ‘‘technical’’ theories of transaction cost engineering, and ‘‘symbolic’’ theories of information technology. Seeing XBRL as social artifacts highlights a number of tensions and with them, research opportunities that traditional approaches tend to ignore. Like most artifacts, XBRL documents often emerge from the labors of specific artisans; but also like most artifacts, XBRL documents necessarily bear the markings of broader social contexts.

Like most artifacts, XBRL documents have material uses, and XBRL documents’ schema often act as practical technologies; but again like most artifacts, XBRL documents also have cultural meanings, and these documents sometimes act not as technologies but as symbols. Thus, XBRL documents are at once both marketable devices and meaningful gestures, and XBRL regimes are at once both technical systems and communities of discourse. From this, it follows that to make sense of a practice; one must understand both the economic and the cultural environments that gave it birth. At the same time, however, one must also recognize that XBRL, like any artifacts, are themselves capable of affecting these environments, both culturally and economically. In short, a successful sociology of XBRL-as-artifact would simultaneously attend to several distinct but related dynamics. It would encompass both the private parties who use XBRL and the
professionals who produce XBRL documents. It would encompass both individual transactions and extended social systems. It would encompass both practical incentives and ceremonial displays. In addition, it would encompass both the influence of social environments on practices and the reciprocal influence of XBRL practices on social environments.

Future XBRL scholarship could embrace the technology cycle analogy even more explicitly. Researchers might, for example, analyze sequences of XBRL, with an eye toward identifying periods of ferment and periods of incremental change. Historical studies could then map these periods onto social, political, and economic transformations in the financial sector and in its client industries.

Researchers could also draw on the technology cycle model to distinguish between competence-enhancing and competence-destroying technological innovations. Evidence on conventional technologies suggest that competence-enhancing discontinuities tend to originate within existing firms, increase barriers to entry, and drive smaller firms out of the market, whereas competence-destroying discontinuities tend to originate from new or marginal firms, decrease barriers to entry, and draw smaller firms into the market. If similar patterns apply to XBRL, the technology cycle model would provide a powerful new tool for understanding the role of legal innovation in shaping the market for legal services. Finally, researchers could mine the technology cycle literature for insights into the emergence of dominant XBRL designs including predictions about where such designs are likely to originate, how quickly they are likely to solidify, and how well they are likely to perform.
Figure: 1

Legend of taxonomy schema and Linkbase drawing conventions\textsuperscript{xiv}.

Two discoverable taxonomy sets, one a superset of the other. The notation href* indicates that the document contains locators with href attributes pointing to the schema elements. Other arcs indicate import, include, and linkbaseRef relations.
i http://www.xbrl.org/WhatIsXBRL/
ii http://www.xbrl.org/HowXBRLWorks/
vii Amernic, Joel H. Close readings’ of Internet corporate financial reporting: Towards a more critical pedagogy on the information highway, The Internet and Higher Education, Volume 1, Issue 2, 1998, Pages 87-112
ix Spies, Marcus, An ontology modeling perspective on business reporting, Information Systems, In Press, Corrected Proof, Available online 3 February 2009,