

# Chapter V

## The Role of Participatory Design in Constructing the Virtual Knowledge Commons

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### ABSTRACT

*The main goal of this chapter is to demonstrate how purposeful participatory design can be used to construct a virtual knowledge commons that both serves and is defined by communities. Other than the proposition that participatory design is a technique to guide participation within a community, the chapter also explores how this technique can be used to nurture and sustain a shared knowledge commons in the virtual environment. To this end, the conditions and consequences of the virtual environment are discussed, illustrating how with participation, the virtual commons is possibly sustainable. The chapter also raises the role of cultural institutions and examines a number of contemporary examples, resulting in a preliminary spectrum of participation by which practices of participation in the virtual knowledge commons by cultural institutions can be mapped. More research and fieldwork needs to be done to refine this model and generate exemplary practices for policy development and best practices in cultural institutions.*

### INTRODUCTION

Historically, the commons refer to resources that are made freely available for all in society to build relationships and cultural democracy. The origins of the commons are most usually traced back to

the 18th century, when shared pieces and plots of land were held and governed in common by communities of farmers. The sharing of land in common were popular (Fox, 1981), until a series of policies from the governments converted these lands into commercial or private properties and

warranted payments from farmers to use these lands (Williamson, 1987). Such privatisation and market appropriations became known as enclosures.

Almost as intriguing as the issue of enclosures to the availability of the commons is the proposition of the commons being a tragedy (Hardin, 1968). A debate made popular by Hardin (1968), the idea of the commons being a disaster was deliberated based on assumptions that individuals will seek first their self-interests, that a pool of resources shared and used in common will result in overuse, and the problem of free-riding will also lead to unfair distributions of resources.

There are key factors which are relevant to sustainability issues of knowledge resources in the virtual environment. Unlike the case of the historical commons which was argued by Hardin (1968) to be a 'tragedy', conditions in the virtual environment has resulted in key structural changes. As a consequence, people are now able to participate easily in the creation and distribution of resources, and increase in such participation may not necessarily lead to overuse. Such participation can exist in various forms. As a concluding discussion, the paper aims to identify a spectrum by which different forms of participation can be utilized by cultural institutions in the virtual knowledge commons. This is done through raising contemporary examples from cultural institutions.

## **BACKGROUND**

Understanding the historical origins of the commons is instrumental to elucidate concepts relating to the virtual knowledge commons. The knowledge commons in today's context refer to the availability of knowledge resources to be shared by communities of people, either free or at nominal charges. The knowledge commons therefore exists in physical forms (such as library or museum collections) or virtually.

Before defining what is meant by the virtual knowledge commons, it is necessary to justify the importance of the topic. There is a certain critical threshold that has been brought about by changes in the virtual environment. By the 'virtual environment' here the chapter is referring to the advent of personal computing and communication technologies, with knowledge resources in the forms of text, video, audio, and images being widely created and distributed amongst people via the World Wide Web. Social networking sites, commonly associated with Web 2.0 have also increased the intensity and velocity of such transactions of knowledge resources between people. These resources are impossible to access without the Internet, which is made up of computing devices, mobile devices such as mobile phones, handheld computers, personal digital assistants, and cables that connect these devices to one another.

## **Resources and the Issue of Scarcity**

The tragedy of the commons as proposed by Hardin (1968) argued for the issue of resource destruction due to self-interests' seeking and free-riding individuals. Because of these individuals, resources in a commons generally deplete in quantity and quality over time. This is most commonly seen in environmental issues such as global warming, climate changes, and the depletion of the ozone layer. These assumptions, however, are challenged in the context of knowledge resources in the virtual environment.

With faster computing, development of media technologies and infrastructure, copies of knowledge resources can be duplicated and distributed relatively easily. Unlike physical resources, the appropriation of a resource in the virtual environment does not significantly reduce the availability of the same resource for others. In other words, the prevalence of digital copies radically negates the issue of resource scarcity. In addition, recent evidence has also shown how the

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