Actor-Network Theory and the Online Investor

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ABSTRACT
An actor-network analysis of the way in which online investors use Internet-based services has revealed a phenomenon that is not commonly reported in actor-network theory research. An aspect of the research that emerged from interviews of a wide range of online investors is a peculiar effect of changes in non-human actors on the human actors. In this paper, the authors report on the particular case and postulate that this effect may be found, if looked for, in many other actor-network theory applications.

Keywords: Actor-Network Theory, Information Systems, Internet, Online Investing, Online Investors

INTRODUCTION
Stock Market investment is a very large industry, with many millions of individuals and households investing in stocks in many parts of the world. In the USA, over 20% of all households own stocks directly and that figure jumps to almost 50% when managed funds are taken into account (Bucks, Kennickell, Mach, & Moore, 2009). In Hong Kong, 35% of the adult population invest directly in stocks (HKEX, 2008). Almost 50% of the adult population of Australia own shares directly and half of those monitor their investments weekly (ASX, 2004).

A significant proportion of these investors now conduct at least some of their investing activities online. In many of these markets, online brokers have taken over as the predominant channel for retail investors. Given that online trading and investing is a significant e-service industry, it is surprising that there has been relatively little research conducted in this field. Kirsty Williamson and Dimity Kingsford-Smith conducted a qualitative pilot study in 2004 that involved interviewing investors about how they seek information on the internet (Kingsford-Smith & Williamson, 2004). One of their reported observations was that many of the investors interviewed sought information and conducted activities both online and offline at the same time. They found that the primary online information source investors used was their broker’s website. They reported that all their investors spoke to others about investing and sought advice from trusted family members, friends or colleagues – with few investors...
using online forums such as chat rooms. For some investors, there was also a community or hobby aspect to their investing activities – they were part of an investment club or often communicated with others about investing, both online and offline (Kingsford-Smith & Williamson, 2004).

How people use information systems has been a prominent research question for many years, and yet researchers have recently stressed how little we understand about system usage (Burton-Jones & Gallivan, 2007). “Despite being an important construct, IS use is still weakly conceptualized and operationalized as frequency, duration, or variety of system functions used” (Barki, Titah, & Boffo, 2007). “Researchers must also consider the nature, extent, quality, and appropriateness of the system use” (DeLone & McLean, 2003). Burton-Jones has proposed that system usage should be investigated by taking three elements into consideration: the System, the User and the Task. He has classified system usage measurements from ‘Very Lean’ to ‘Very Rich’ (Figure 1) (Burton-Jones & Straub, 2006).

A great deal of research has investigated why people use information systems. The research reported here was looking at the way they are used; the nature of the interactions between the technology and the person. This study, of the nature and practice of use of technology rather than the reasons for its adoption, is particularly apt for the application of actor-network theory and allows investigation of the ‘very rich’ nature of technology use.

An extensive study using an Actor-Network Theory approach was conducted. The results of the wider study are reported elsewhere. The purpose of this paper is to present an unusual finding that emerged within the study. The contention presented here is that an enduring network of mostly non-human actors has, in effect, produced an ongoing translation of humans.

METHOD

Tatnall (2009), following Law (1991), identifies Actor-Network Theory as considering social and technical determinism to be flawed and proposes a social and technical account in which nothing is purely social and nothing is purely technical. Tatnall suggests that Actor-Network Theory allows us to look at non-human entities such as computers, computer programs and the Internet. All these non-human entities are to be considered in the same way as a human entity; existing through the interactions with other entities forming a network. Actor-Network Theory requires us to interview human actors but also to study in detail the non-human actors so we can determine the nature of the network.

The first stage of this process was to identify a number of people and interview them to determine the non-human actors involved in online investing. A convenience sample of Australian residents was chosen through a viral marketing campaign. A diverse group of males and females in a number of age groups starting at age 30 was recruited. These people were deliberately chosen to have diverging backgrounds, but all
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