

From 'snap-shots' to 'moving pictures': Tracing Processes Using Narrative Sequence Analysis in the Evolution of an E-Business

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Abstract

A central focus of IMP research is the process of development and evolution of firms, relations and networks. Narrative Sequence methods, first developed in sociology but not widely known or used in marketing, offer a means of more systematically examining and explaining such processes of change over time. We use these methods to guide our analysis of a particular case study of the evolution of ebusiness in a major Australian financial institution.

Narrative sequence methods stem from a desire to move from an analysis of causation in terms interaction among disembodied proximate variables to a focus on the interaction of "events" taking place over time, in which actors act and interact; to go from 'snap-shots' highlighting simple correlation between variables, to 'moving pictures' in which the timing and order of unfolding events is of central interest.

First we review some of the main types of factors shaping the evolution of ebusiness in a firm. Next, we describe the nature of narrative sequence methods before providing an overview of the focal case. We then describe and illustrate some of the ways the case can be analysed using narrative sequence methods and discuss the issues and problems involved.

Introduction

The increasing involvement of a firm in e-business systems may be likened to the process of internationalisation of a firm, which has been the subject of much IMP research. We have termed this process “internetalisation” and involves learning and adaptation as a firm commits resources to and combines various types of e-business technologies (Buttriss and Wilkinson 2003). The process also has important network dimensions as firms are pushed and pulled into e-procurement, e-marketing and other internet based commerce systems, similar to the way a firm’s internationalisation is shaped by its network context (Johanson and Mattson 1988)

There are various starting points and many paths a firm may take in becoming an ebusiness. A firm may first utilise technologies for internal and external coordination and communication. In the 1970’s firm’s first began implementing electronic commerce technologies in the form of electronic document exchange (EDI) for the exchange of information and computer-enabled logistics to cut costs and enhance manufacturing efficiency through systems such as manufacturing resource planning (MRP) and just-in-time (JIT) inventory management techniques (Swatman 2000)

However a little over 10 years ago the development of a graphical browser made Internet technologies easy to use and opened the World Wide Web to mass-market potential. During this time the offer of universal standards and interoperability, and ubiquitous use has seen the Internet go from a mere curiosity to a substantial business strategy with business investment in Internet and electronic technologies continuing to grow(ebusinessforum).

In this paper we draw on Narrative Sequence methodologies to guide our analysis of a particular case study of the evolution of e-business in a major financial institution. As Abbott (1990) has suggested we need to move from an analysis of causation in terms interaction among disembodied proximate variables to a focus on the interaction of “events” taking place over time in which actors act and interact; to go from ‘snap-shots’ highlighting simple correlation between variables, to ‘moving pictures’ in which the timing and order of unfolding events is of central interest.

The structure of the paper is as follows. First we review some of the main types of factors shaping the evolution of ebusiness in a firm. Next, we describe the nature of narrative sequence methods before providing an overview of the focal case. We then describe and illustrate some of the ways the case can be analysed using narrative sequence methods and discuss the issues and problems involved.

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Factors Shaping the Evolution of E-Business in a Firm

The paths and experience of individual firms differ in both space and time, influenced by their starting point and the changes taking place within three crucial contexts that come together at critical developmental junctures to shape strategic trajectories or influence organisational inertia. These three types of contexts concern firm level factors, network and industry level factors and the broader socio-economic environment.

Firstly, the perceptions of opportunities and problems of those involved in developing and implementing commerce-business systems are relevant. These perceptions change over time through the experience of engaging in various forms of Internet commerce in the focal firm, or other organizations and through the influence of others and their experience and opinions. Other potentially influential firm characteristics include its strategic objectives, access to resources and existing legacy systems.

Secondly, interaction takes place between the firm and other organisations which influences the take up and nature of Internet commerce systems. These include those firms, with which the firm is directly connected such as customers, suppliers and logistics, requiring integration of the supply chain to ensure interoperability and compatibility. As well other organisations such as competitors, industry bodies and regulatory authorities play an important role in setting industry, national and international standards.

Finally, change takes place within a larger social and cultural context. These processes sometimes transform whole industries or change the rules of the game. Technological change, the take up of home computing and use of the Internet by individuals, business and government are examples of this.

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Narrative Sequence Analysis

In order to study the process of change over time we need to move away from cross-sectional variable based studies that focus on the way variance in a focal behaviour is associated with patterns of variance in other proximate variables. A focus on variables obscures our view and understanding of the actual processes taking place. The variables based approach implicitly assumes some underlying behaviour taking place through the press of the variables at work but this is left unstated. Variables do not behave actors do and it is through their actions over time that the processes of development, response and evolution play out.

In previous research longitudinal case methods have been employed, developing ever finer detailed stories describing who did what and when – that is actors, activities and events ordered over time. However such data tend to be limited to descriptions of surface observations. The challenge is to move from these surface stories describing patterns of events to providing explanation of underlying processes or mechanisms that generate the surface order or patterns and therefore account for change and evolving actors, be they people, firms, collective actors of departments, teams and groups or simply locations in space (Abbott 2001; Langley 1999; Pentland 1999).

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Explaining why a certain process or mechanism exists involves discovering the nature of the structure or object which poses the mechanism or drives the process. In this paper we suggest that an appropriate method for doing this in a systematic way is narrative sequence analysis. This is a collection of analytical techniques broadly consistent in their endeavour to uncover deeper causal processes or mechanisms. These methods enable us to focus directly on the actions and interactions taking place over time in systematic way that is more than simply descriptive story-telling. While narrative methods continue to evolve in sociology and other disciplines such as biology and artificial intelligence, they are not widely known or used in marketing.

Claims of causal explanation from narrative description is a challenge to positivistic methods requiring that prediction of outcomes should be possible across a wide range of possible contexts. Here causal mechanism means some law-like regularity between events – explanation follows comparison and generalisation. A move to narrative methods of explanation requires an alternate epistemological stance, where explanation of events uses explicitly causal and metaphorical language and suggests regularity is unusual and that events situated in time / space are unique. The processes that drive surface order may happen relatively infrequently and operate independently such that they may produce different outcomes in different contexts. Events then can then be said to emerge from the interaction of deeper processes or mechanisms working within particular contexts (Abell 1998).

Central to narrative sequence analysis methods are arguments of path dependence. A path is laid down as actors interact over time creating a history which is the basis on which a future is constructed. Outcomes at a particular 'critical juncture' trigger feedback mechanisms that reinforce the recurrence of particular outcomes and patterns into the future. Importantly small initial events can have large longer-term effects and once a particular path has been followed changing paths or reversing may be very difficult. Events or processes occurring during and immediately following 'critical junctures' therefore become crucial. The locking-in of particular trajectories accounts for organisational inertia and shows how the dynamics triggered by an event or process at one point in time reproduce themselves even in the absence of the original event or process. The order of events makes a fundamental difference to outcomes, something that is usually ignored in traditional multivariate statistical analysis. (Pierson and Skocpol 2002)

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A focus on conjunctures also sheds light on interaction effects between processes that become linked at particular points in time and generate casual sequences depending on relative timing. Some causal processes operate more rapidly than others and are constrained by slower moving process. Others are subject to threshold effects and may have little significance until they attain critical mass, which may then trigger a major change. Still other processes involve chains with several links and require some time to work out (Pierson 2003).

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Causal explanation therefore requires understanding not only the deeper processes, but also the nature of the context in which they operate and the

impact of contingent forces. It requires understanding how they all fit together. Further details of the method are provided as part of the case analysis.

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Narrative methods fit well with IMP thinking. Regardless of the unit of analysis there has been an emphasis on connectedness. Surface phenomena such as relationships and networks are explained in terms of their development over time through the ongoing deeper patterns of actions and interactions taking place among the organisations involved. Such relationships and networks are complex which in part stems from the nature of the connectedness of the actors. These may be social, technical or economic connections that are not simple one-off exchanges but ongoing and often long-term in nature. These tie the firm to different, often overlapping networks and the firm itself becomes defined in terms of its patterns of interactions, investment in relationships and its position within networks. Relationships and networks develop over time, the behaviour of which is both enabled and constrained by the complex interplay of multiple connecting layers and its history (Araujo and Harrison 2000). Resources are passive actors that constrain and enable actions and interactions within and between firms. They are also in part co-produced over time through these actions and interactions (Håkansson and Snehota 1995). Lastly, various schemas underlie the manner of action and response of firms over time but are in turn shaped by the outcomes of these actions and interactions (Welch and Wilkinson 2002). Surface phenomena such as the firm, relationships and networks are therefore constantly in a process of being and becoming generated by deeper causal processes.

The dynamism of industrial networks has been recognised in both theory and the research methods employed. History matters in shaping the way relations and networks evolve. Longitudinal case methods have long been employed by IMP researchers to capture the wholeness of this complexity in relationships and networks. Narrative methods offer the potential to capture the deeper processes driving relationship and network behaviour both within a single case and for cross case comparisons in small N studies.

Borttaget: The path a firm may take is enabled or constrained by the network of relationships within which they are situated such that current events have the imprint of past events (Araujo and Harrison 2000).

Borttaget: Industrial market phenomena are often unique and therefore studies often entail only one or a few case studies.

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The Focal Case

The case concerns the inception and evolution of Commonwealth Securities (CommSec) the discount stockbroking service of the Commonwealth Bank of Australia (CBA) and how it metamorphosed into Premium Financial Services to manage the high-worth customers of the Bank.

The Commonwealth Bank of Australia is one of Australia's leading savings and trading banks with integrated financial services, retail, business and institutional banking, funds management, superannuation, insurance and investment and broking services.

The early 1990's saw the privatization of a number of public assets such as Qantas the national airline, along with 49% of the Commonwealth Bank (CBA1) itself, which were offered for sale through public share offerings. This trend was expected to grow with continuing privatization of government

assets, de-mutualisations and other share offerings, including speculation of the privatization of the remaining 51% of the Bank (CBA2).

By 1991 direct share ownership in Australia had reached 10.2% of the adult population, (up from 8% in 1988), still less than half of the comparable figure in the United States and Britain. This figure reached 20% by 1997 and peaked at 41% in 1999 before falling to 37% in 2002 (Australian Stock Exchange Ltd 2002).

Many of these new shareholders were un-diversified, had low value share portfolios and relatively low transaction frequency and felt intimidated by traditional share brokers. This disconnect between first-time shareholders and traditional stockholders mirrored the UK market, which had undergone a similar period of privatisation of public assets and demutualisations. For many their only experience was to buy shares in the floats and then sell them. There was little understanding of the benefits of long-term direct share investment nor an easy, low cost access to the market.

It was into this environment that CBA appointed (1994) Mr Michael Katz as new head of Institutional Banking (IB) who immediately saw a need to establish an equities capability to satisfy the full range of funding requirements of the Banks major corporate clients. Within 6 months he had overseen the preparation of a business case and sought and obtained CBA Board approval (Nov 1994) for the establishment of a low risk, low cost (about A\$5 mill) discount broking business to be called Commonwealth Securities – CommSec. The broker would initially operate in the secondary market but the aim was to eventually gain the required experience to also handle primary market offerings.

By March 1995 CommSec launched as a telephone based discount broker with a staff of about 25. It quickly grew, putting pressure on their dedicated call centre resources that often overflowed onto the CBA main call centre in periods of peak demand. In October 1996 the CommSec Internet service launched, initially as an information site, immediately reducing call centre loads by 30%. Live processing of select stocks soon followed, made possible in part by the Australian Stock Exchange (ASX) moving from 'open outcry' floor trading to full online trading, allowing all ASX members to trade in real-time.

Ongoing technology development was necessary in order to meet increased customer demand. Internet trades were 'doubling every three months' and customers were continually calling for new services such as straight through buying of equities on the New York Stock Exchange, NASDAQ, and Hong Kong Stock Exchanges. New products were also developed including a margin-lending product on a parcel of leading Australian equities. These developments progressively required greater direct integration into the legacy systems of these key partners as well as the CBA systems.

Continued improvement of the technology was also driven by increasing competition in the discount broking business with 16 new entrants entering the market through to 2001 including the three remaining large domestic banks,

NAB, Westpac and ANZ along with some large international discount brokers such as Charles Schwab, E*Trade and Quicken, either directly or in partnership with major Australian stockbrokers or entrepreneurs. The price per trade fell from the initial price of \$75 in steps of \$50, \$28, and \$19.95 eventual to \$14.95 in January 2000.

Demand grew dramatically driven by a worldwide bull equity market that included the dot.com boom peaking in 1999/2000 and involving a large number of new equity listings and increased speculative equity trading. This period also saw the beginning of the 'daytrader'.

CommSec had a philosophy of rolling out improvements to the systems and web site regularly rather than with large periodic changes. A conscious decision was made to undertake this development using numerous in-house project teams working in parallel on a six-week project reporting time frame. Initially the only outside support was with two men who had been working with CommSec in the integration of the CommSec website with the ASX. Over time they continued to learn along with the CommSec teams, joining with another man with web hosting experience. They went on to form their own technology support firm CommSolve continuing to work closely with the CommSec teams on system and process development. This included the continued upgrade of the website and development of systems for new products and services. It required greater linking into the legacy systems of CBA and other strategic partners.

This system of development was in contrast with CBA who had entered into a 10-year strategic partnership by taking 35% equity in Electronic Data Systems Australia (EDS). The arrangement was as a single source supplier of CBA technology development services and IT asset procurement.

However CommSec avoided using EDS. The CBA contract with EDS was not specific for Internet/web based services and EDS pricing was deemed 'overpriced for a small but growing, low-margin business such as Commsec'. There was also a recognition of the need to retain the 'business intuition' associated with the use of the technology'. There was a 'concern that if all the technology understanding were handed over to a single player, there would not be sufficient knowledge within the company to maintain contestability of the supply of this critical part of their business'

In 2000 a report by JP Morgan showed that CBA were facing strong competition for high worth customers and were losing market share. CBA decided to undertake a major restructure that included the establishment of a new division to be called Premium Financial Services to manage the financial services of the top 8-10% high-worth customers whose financial requirements had outgrown traditional banking services.

It was decided to leverage the CommSec resources, in particular their systems, key products and services which were now considered appropriate for servicing high worth clients. Crucially CBA was having difficulties with the EDS arrangement. Many key people, who had moved from CBA to EDS as part of the deal, had soon left. Partly they had found the new arrangement

frustrating, but also people with IT experience and qualifications were in high demand both in Australia and internationally.

The need to move quickly and viewing the CommSec people as 'the only ones doing anything innovative within the Bank' saw the appointment of the senior management of CommSec to take on the responsibility of heading-up the PFS division. A new head of CommSec was appointed from outside the Bank and a new team-based approach implemented to manage the client needs. A team included a personal banker, commercial banker and investment and equity experts. Staff immediately grew from about 300 to 1500 with the extra people being recruited from both within the Bank and externally.

To provide a 'one-view' of each customer required further innovative technology solutions. A 'back-end' system providing seamless access to CBA legacy systems holding client records, transactions details and history was developed in partnership between teams from EDS with experience in the CBA systems but lead by teams from PFS Management and Engineering division, previously the CommSec technology teams, with their 'front-end' experience. This system came to be known as Empire and was rolled out across 30 strategic branches, initially servicing 195,000 high-worth customers.

In September 2003 under pressure to reduce Bank operating costs, David Murray the CEO of the Commonwealth Bank of Australia (CBA) outlined the bank-wide implementation of Republic 'across its entire 10 million strong customer base and branch network'. Various alternatives were considered including EDS's ability to develop a CRM system but quickly dismissed. CBA decided instead to give responsibility to the PFS division for the further development and implementation of the Empire system now renamed Republic.

Republic has been described by JP Morgan as 'ambitious' and 'a project of unprecedented scale in Australia'. The future careers of a number of key people, including the CEO of the Commonwealth Bank, David Murray and the head of Premium Financial Services, Michael Kats have been linked to the successful and timely current roll out of this system.

Case Analysis

As a first step interview transcripts and secondary data source were examined in order to identify the nature and timing of key events and other processes taking place as well as the actors involved. From this a temporal narrative or “story” was constructed. The contextual framework described above in part informs the temporal and spatial boundaries of this narrative and serves to deconstruct the text into formal structures. This involves biographies of key actors or of evolving contextual processes. The biographies are in terms of the sequence of events taking place and their composite actions and

Narrative sequence analysis presents some interesting dilemmas and has been the source of much debate among researchers interested in unpacking temporal casual processes (Mahoney 2003; Tilly 2001).

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Classifying Actors, Actions and Events

The focus of narrative analysis is on actors acting and aggregate or macro actions are defined in terms of patterns and sequences of individual actions and events. Two main types of analytical approaches to defining and explaining actions are to be found in the literature. One approach presumes that all macro or global outcomes and therefore events are the result of aggregate micro action of purposefully acting individuals explained in terms of rational choice or game theory (Abell 1987; Hedström and Swedberg 1998).

But not all actions reflect intention and Abbott (2001) argues that we should remain ‘explicitly agnostic’ about the source of actions. While some events are indeed the result of purposeful actions, others may well have been irrational, happen by chance or be the result of tradition or social influence.

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Andrew Abbott challenges our focus on actors acting and makes the existence of actors problematic and something to be explained as part of the analysis (Abbott 1990; Abbott 1996; Abbott 2001). Actions are the primary units of analysis and that the existence and identification of actors is explained in terms of reproduced patterns of actions over time that define them, as opposed to being presumed to exist at the outset. People are biological and their bodies are open systems reconstituted over time by the repeated creation and use of chemicals and proteins to form our bodies and systems from the food we eat and the environment we live in. People play different roles in firms and organisations and in these roles are the actors in the firm. Roles are defined in terms of repeated patterns of action and interaction with other roles. Different people may play the same role over time and a role may evolve into a new type of role, which in effect creates a new type of actor in the firm. Similarly, firms are defined in terms of repeated patterns of action and interaction, both internally and externally, carried out by people playing different roles. The actual people or actors that give rise to these patterns of action and interaction change over time as people enter and leave the firm and change roles, even though the firm remains an identifiable actor through time. Over time the patterns of action and interaction among firms change giving rise to different firm, industry and network structures (Wilkinson 1990).

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Despite these differences the central focus is on accounting for narratives in terms of action that brings about outcomes – events, and how this is to be explained in terms of other actions and events from which they eventuate. Events are the meaningful parsing of actions, both temporally, where the order of actions as forerunner, successor or outcome is a coherent sequence, and spatially as ‘a vertex in a synchronic ensemble’ or constellation of actions (Abbott 1998)

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While narrative analysis focuses on explaining actions in terms of other actions or events a number of factors need to be taken into account in explaining a given action. Abell (1993) identifies four types of contexts that that are relevant. First is the history of prior actions and events and their outcomes that come to bear on the focal action or event. Second, are the environmental conditions that are not the consequences of prior action by the focal actors. Third are the beliefs, values and attitudes of the actors involved which stem from their prior socialization and which stem from relevant prior social actions and interactions. Fourth are the strategies of the actors and their perceptions of what other actors may do, concurrently or subsequently.

A central issue in narrative analysis is distinguishing between different types of actions. Sometimes this is done empirically in terms relevant to the specific domain of the study and inter-rater reliability is used to identify reliable and distinguishable categories of action (Sabherwal and Robey 1993). But more theoretically driven taxonomies have also been developed. For example, Abell (1987) identifies eight types of actions based on three dimensions: doing unintentionally versus doing intentionally, doing actively versus forbearing to do, and doing positively versus preventing. These types are then attributed to the actors in a narrative and placed in four separate contexts; intentional premises of action, cogitative premises of action, actual preconditions of action and consequences of action.

A related issue to the classification of actions is the boundaries of events, which are constellations of actions and interaction. First, events differ in their temporal duration. A Board meeting of CBA may last only a few hours, or the chance meeting of key decision makers may be only fleeting. Conversely other events, such as the preparation of the CommSec business case may be seen to stretch for much longer periods such as weeks or months, or work themselves out over more extended periods, such as the accumulation of share ownership in Australia or the development of Internet technologies. It becomes clear that events may overlap, be nested or relatively long events may be decomposed into an enchainment of smaller events.

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Second, narratives and events can be identified at different levels of aggregation or abstraction. We may begin with broader ‘global’ outcomes (events), yet in asking how did this come about, our focus moves to local detail (semantics) and connectivity (syntax) – what events lead to this outcome. It may then be necessary to go deeper still seeking further explanation (Abell 1987). Indeed the process of collecting and parsing raw data in the case study development has evolved as an iterative process of immersion into the finer detail of actions and events in order to explain ‘global’ events. Within a narrative there are also periods that are ‘hot’ and therefore

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characterised by higher densities of dates and events. The narrator may choose to chronicle the events in fine detail of time and action. Selection of these hot areas is not innocent but purposeful to highlight key periods in the narrative such as critical junctures. Some periods or actors may be pushed to the background despite ongoing events while others are brought to the foreground. The narrative may also move from a focus on action and events to highlighting outcomes of events. In this way an ideological bias may colour the narrative, but this should be explicitly acknowledged (Franzosi 1998). While a global narrative may perform a referential function the ability to highlight subplots which may offer evaluative contribution may explain the underlying causal process at work. Therefore by bringing to the foreground certain events and relegating others to the background we highlight subplots of processes such as learning, adapting or evolving.

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Determining the role of past events is difficult. While history is 'lived front to back' we make sense of the past from 'back to front' or at least we construct our historical narratives in this way. While some events may be observable at the time, we only make sense of other events well past the point of structuration, the moment when they take shape. Sometimes we can only make sense of past events through events that happen in the future (Abbott 2001). At different points in time a number of potential histories may be possible and rather minor events can have important consequences in shaping future paths of development.

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The boundary of actors is also problematic. We may label actors/entities as stable lineages of events. Actors may be biological individuals in which case a stable lineage is a biography of key events built up of prior social interaction. However, actors may be collective actors such as teams, firms, institutions, industries or indeed social movements or processes and even physical locations. Such collective actors are defined in terms of their patterns of action and interaction over time. The ongoing flow of actions and events serve to both reinforce and undermine existing patterns of action and interaction and in the process turning existing potential boundaries into actual ones recognised and referred to by actors. Explaining change in actors/entities and the paths they take is the account of actions that take place within the boundaries of the actor/entity, the making of new connections or disconnections in both time and space (Abbott 2001).

An example will help clarify the issue. In our case study, the collective actor Commsec does not begin with a prescribed boundary. Instead its boundaries become defined and evolve over time in terms of its developing patterns of action and interaction with other actors, or what Abbott refers to as a 'systematic dimension of difference' of social space or 'proto-boundaries'. We may see this not just as the drawing together of biological individuals, but individuals with similar thinking, prior professional experience or knowledge or indeed views of the world (Abbott 2001).

Mapping Sequences

The next stage of analysis is to construct temporal maps of events over time to reveal how events occur before or after others in time and which are connected to each other in some way e.g; through an actors memory and experience; expectations of future events; through communication and other forms of interactions between actors related to events such as weekly or six-weekly team meetings or communications with strategic partners; media reporting of pending competitor actions; or direct feedback from clients or market research.

Figure 1 shows a partial map of the sequence of 'global' events 'somewhere above the level of maximum detail' taking place in the case. Time flows down the table and each row reflects a time period in much the same way that a simulation might show the pattern of changes in a set of variables over time resulting from their interactions (Wolfram 2002). The vertical lines represent different actors (as defined above) that exist through time and are involved in various events in the case (other events and actions in which they are involved could be germane but are ignored for the purpose of parsimony (e.g. going to lunch, chatting with a mate). Events are represented by the symbol ●. The lines connecting events represent our interpretation of 'lead-to' links between events across actors and context. Arrows-in indicate a prior history of relevance to the actor. Dashed grey lines indicate examples of cognitive action.

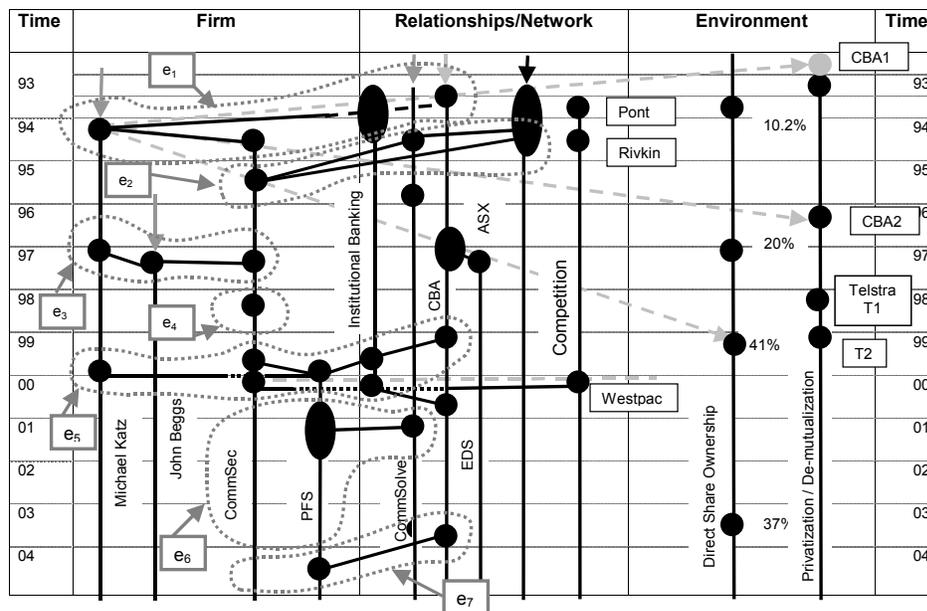


Figure 1 – Global Narrative Map

These complex interactive sequences may be explained by grouping various actions and events 'onto' higher more abstracted events, which are depicted in terms of dotted lines grouping actions of different actors and labelled e1 to e7. A new global narrative can then be constructed explaining the critical junctures in the path taken. See Table 1

Event	Abstraction
e ₁	CBA enters discount stockbroking market using telephone trading, by setting up CommSec
e ₂	CommSec goes online
e ₃	John Beggs appointed head of CommSec
e ₄	Margin lending launched
e ₅	CBA established PFS, run by Mike Katz, CommSec is the broking service for these clients
e ₆	PFS develops Empire CRM system for servicing premium clients
e ₇	CBA appoint PFS teams to implement Republic

Table 1 - Abstracted Global Narrative

This map may be compared to others that have been developed in past research using narrative methods. For example Abell (Abell 1987) utilizes a narrative table for identifying the actors, actions and conditions of those actions and both the subjective and objective outcome of the action (See Table 2).

Time	Conditions of Action	Action Taken	Significant Outcome/Event	
			Subjective	Objective
t1 March 1994	Privatization of government assets, Qantas, CBA I Demutualization of large insurance firms incl AMP and NRMA CBA need to provide equity funding option for corporate clients	CBA recruits Michael Katz to Head of CBA Institutional Banking	Brings merchant banking and entrepreneurial expertise to IB	Katz reviews IB client funding needs identifies need to develop some equity products and distribute through a retail system
t2 June → Oct 1994	Business case prepared for CommSec	CommSec business case is presented to the Board of CBA	Low risk / cost option in secondary market first	Business case approved by CBA Board
t3 Jan 1995	Stock broking reporting requirements too onerous to keep stock broking within CBA	Set up of separate entity – CommSec with license under that name	The organization was relatively autonomous and avoided much direct contact with the Bank	CommSec has separate operating structure, 25 staff, located in Sydney CBD, start up cost \$5mill
t4 Jan 1995	Rickard has Banking experience in CBA, Stott has experience from UK market during similar period of growing public share ownership	Mike Katz appointed Chairman, Mr Paul Rickard and Mr Mal Stott directors of CommSec		Rickard and Stott required to become members of ASX
t5 Jan → Feb 1995	Banking credit and risk policies not suitable for stockbroking	CommSec negotiate a number of policy variations with the Bank		Equities can be held as security
t6 Mar 1995	Only 2 small discount brokers in market	CommSec launch phone banking \$75 / trade	Existing stockbrokers taken by surprise seeing CBA actively trading	Manual processing. Rapid growth → pressure on call centre resources
t7 Jun 1995	ASX finalize period of upgrading and automating online trading including ceasing 'open outcry' trading	CommSec engage CommSolve to develop web site and processes for real time price quotes	CommSec teams and consultant gradually learn how to 'do it' together	Web site and real time price quotes facilities est
t8 Oct 1995	Site trailed with CBA staff	CommSec launch online trading \$50 / trade		30% drop in call centre activity

Table 2 - Narrative Table (adapted from Abell 1987)

A directed graph or digraph is used to map the structure of the narrative. Here time flows across the page. Actions in time are represented by ● and arrows indicate 'leads-to' paths (see Figure 2). The diagram and narrative are then examined to identify homomorphism (abstraction of constellations of actions) to identify meaningful events. Our example represents a global perspective of the inception of CommSec. The new narrative is presented in Table 3

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Event	Narrative
e ₁	CBA appoint Mike Katz who seeks and receives approval for establishing CommSec discount broking
e ₂	Key people appointed and initial systems developed - CommSec launches telephone broking
e ₃	CommSec engages CommSolve to integrate website with CBA legacy systems and ASX automated equity trading – CommSec launches Internet trading

Table 3 – Abstracted Narrative – CommSec Inception

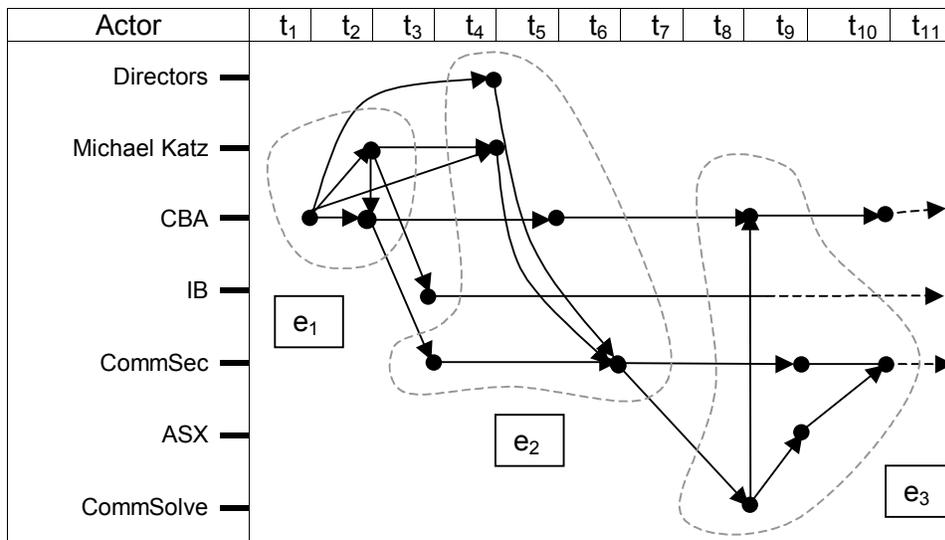


Figure 2 Narrative Diagram – CommSec Inception

Discussion

Our purpose has been to illustrate the nature, issues and problems that are involved in using narrative sequence methods and we have only shown a small part of the overall case event sequence. Nevertheless we can use this to show the kinds of insight that can be gained from this type of analysis.

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Our application of narrative sequence methods offers a glimpse into the potential of these methods to overcome the ‘black box’ problem of dominant methods that infer causality by establishing associations between proximate variables. Narrative sequence methods try to identify intervening processes through which independent variables exert an effect on a dependent variable. While linear regression models may estimate average net causal effects of independent variables they do not provide information as to why the independent variables have the effect they do, leaving researchers uncertain as to whether the association reflects true causation or a spurious product of some other unknown antecedent variables. Attempts to identify deeper intervening variables to account for unexplained variance is endless as any explanation will yield it’s own ‘black box’ (Mahoney 2003).

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As Abbott (1998) characterises it “regression relationships are the mere entails of real social action”. Discovering ultimate causes requires working backwards from phenomena under investigation and taking a closer look at the antecedent sources of action and colligation of events – the configuration or plot of events.

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Borttaget: (Abbott 1998)

It is beyond the scope of this paper to consider the ‘vast, controversial and inclusive’ debate on causal mechanisms. However one-way we might

illustrate cause is to draw on the explanation of generative cause offered by Aristotle (Abbott 1998; McKelvey 2004). He suggested that there are four types;

1. *Material Cause* – explanation of social phenomena lies in the different qualities of the material going into them, such as human and material resources. In our case for example the path taken by our focal ebusiness is influenced by the technology, prior knowledge of key management and available financial resources. It is clear that an important element driving the inception and development of CommSec was Mr Michael Katz. His extensive career in merchant banking had given him a good appreciation of the equity funding needs required of corporate clients. CBA's requirement of a low cost, low risk entry required a more modest initial business idea and existing legacy systems within CBA constrained the development of some systems.
2. *Formal Cause* – is a structuralist perspective of causes with a view to the networks, patterns and form that determine the shape of human phenomena. The path that CommSec took and the sequence of events of its eventual metamorphous into PFS was influenced by interaction between key actors within and external to the organization. The close relationship between CommSec and CommSolve, the need for the ASX to fully automate, the pending entry of new entrants or responding to client requests for new products and services controlled the timing and path taken.
3. *Final Cause* – is a functionalist perspective of causes and is interested in the purpose, ends or motives of actors. While CommSec began in the secondary equity market, this was a low risk, learning strategy with an ultimate aim of acquiring the capability and resources necessary to offer primary equity raisings for CBA's corporate clients. CommSec's decision to drop the price per trade to \$19.95 was possible due to its low cost operation. It was also seen as a deterrent to potential new discount stockbroking entrants and the announcement was used to ambush Westpac's pending entry into the market.
4. *Efficient Cause* – the immediate, final or proximate means by which action is determined. We may think of detailed local action and outcomes. The immediate result of CommSec going online was a 30% fall in the workload of the call centre. Announcement of the Republic CRM system immediately sent the CBA share price up as the market viewed potential cost savings positively. The assembly of the PFS division saw staff numbers go from 280 to 1500.

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Conclusions

Borttaget: To return to Andrew Abbott, social life is a process that continuously embodies itself in structures of situated actions, of social relations. At the heart of explanation of such phenomena is interaction across time and context that manifests itself in unfolding events (Abbott 1998).¶

Social life is a process that continuously embodies itself in structures of situated actions, of social relations. At the heart of explanation of such phenomena is interaction across time and context that manifests itself in unfolding events (Abbott 1998).

We have shown how narrative sequence methods can advance our understanding of the process and events by which firms become internationalised (Buttriss and Wilkinson 2003b). These methods are still under development and we are still in the learning process ourselves as we try to grapple with applying them to our case study.

We have shown how the structure of an organisation is continually in a process of being reproduced or not through time as a result of the events taking place, including the nature and roles that individuals can and do play in the organisation. In keeping with IMP thinking, individuals act and interact with others in the organisation and without and bring with them their resources and memories from the past, which in turn shape their future actions and interactions. Particular constellations of actions and events occurring at a particular time and place can have radical implications for the future path of evolution of a firm, which in turn stem from a sequence of seemingly minor or unrelated past events such as the hiring of a person with a particular background, the growth in a market.

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Narrative sequence methods offer a means of coming to grips with these complex patterns of action and interaction taking place over time in a more systematic and disciplined way. They can reveal how earlier events entrain future paths of development and how the order of events, rather than just the events themselves, shape later responses and events.

Borttaget: These methods can be usefully linked to the AARS framework of IMP to show the way these basic elements of relations and networks interact over time and shape the evolution of relations and networks as well as the individual organisation involved.

In terms of the emergence of ebusiness in the CBA we can see how the inception of CommSec had its genesis in part in the experience and position of a newly appointed head of Institutional Banking, Michael Katz and the changing needs of corporate clients of the parent bank. It was also influenced by broader social forces such as the growing large-scale direct ownership of equities and a general philosophy that Internet technologies would dramatically impact on traditional branch network banking. The subsequent path taken has been influenced by interaction between actors within CommSec such as Michael Katz, Paul Rickard, Mal Stott and John Beggs as well as collective actors such as the parent bank, IT consultants, ASX and the entry, growth and withdrawal of a large number of both local and international entrants into the discount broking business. We can also see the gradual acquisition of the required knowledge to successfully develop and implement large scale technology solutions. The later has seen the leveraging of CommSec resources firstly into Premium Financial Services and currently the development and implementation of a large scale CRM system into the parent bank.

Narrative sequence methods can be used to advance our understanding of other developmental and evolutionary processes that are central to IMP research. These include the internationalisation of firms, the develop of relations and the development and evolution of industrial networks. Existing

longitudinal case studies can be re-examined and narrative sequences compared in order to reveal the nature and role of different types of underlying driving mechanisms and paths of development.

Can narrative sequence methods help management? By identifying the underlying driving mechanisms and the key role of particular events in shaping the pattern of development we may be able to identify influential types of intervention strategies. At the same time sequence analysis may reveal the limits to management action and how some processes may take on a life of their own.

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