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Analytic narratives in accounting history: Combining formal models and small sample research.

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Abstract

Purpose
The paper provides an introduction to the "analytic narratives project" in political science that argues for the use of formal models as a basis for narrative history. The approach is illustrated in an accounting context by reinterpreting the timeline of Scottish professionalization presented in Lee's (2006) innovative counterfactual history.

Design/methodology/approach
Analytic narratives use formal models to create expectations that can be contrasted with actual events. The use of formal models provides a bridge between theory and small sample research that allows theory to inform case analysis and case analysis to contribute to theory development. Lee's (2006) timeline is reinterpreted as an analytic narrative based on labour market signaling.

Finding
The analytic narrative embeds Lee's (2006) counterfactual history within a structured set of alternative outcomes. These outcomes are evaluated to identify which one would be preferred by all parties (a Nash equilibrium) and then backward induction is used to identify the choices necessary to reach that outcome. The analysis identifies some conditions necessary for actual events to unfold in the way they did.

Research limitations/implications
The application of analytic narratives to the timeline of development of the Scottish accounting profession suggests alternative research questions and provides an alternative counterfactual outcome to that suggested by Lee (2006).

Originality/value
The paper advances the debate on the forms and uses of narrative in historical research by introducing and illustrating an important innovation.

Key words: historiography, analytic narratives, counterfactual history.

1. **Introduction**

The "narrative turn" in the social sciences has been developing since the early 1980s (Michell, 1981). This involves the use of linguistic metaphors to understand social phenomenon, including accounting, and the use of narrative forms to structure and report research. The "narrative turn" in accounting suggests that we look at accounting reports "as texts rather than economic commodities" (Macintosh and Baker, 2002, p. 184) and evaluate the adequacy of accounting texts using the tools of semiotics, literary criticism and deconstruction. Similarly, the "narrative turn" in accounting research implies that we should assess our research by how well we can construct a narrative of accounting events. If we cannot construct a convincing narrative, then it is likely that our research has failed to uncover the mechanisms that underlie the phenomenon we seek to understand (Polkinghorne, 1987). Importantly, the narrative approach allows for multiple interpretations of events and does not seek to narrow our understanding of phenomenon to a single version of reality (Macintosh, 2003).

The narrative approach to accounting research has been contrasted with approaches that rely on formal models and numeric measures of variables and their correlations (Llewelyn, 1999). While the narrative approach has grown in popularity, the use of formal models and quantitative analysis dominates mainstream accounting research. It was inevitable, therefore, that narrative analysis would confront quantitative analysis but is this simply a case of competing hegemonies of research methods? Is it possible to combine narrative methods and formal models in a constructive manner? This issue has been explored in the political science, historical sociology and institutional economics literatures where the phenomenon of interest usually presents researchers with small sample sizes, for example nation-states experiencing specific conditions such as revolutions, but the field to which these researchers present their results emphasize the use of formal models and quantitative analysis.

In these literatures there is a growing conviction that narrative analysis can be combined with formal models in a way that strengthens narrative analysis and allows narratives to contribute to theory development. A key contribution to this debate has been Bates et al (2006) "analytic narratives project" that has attempted to systematize the combination of models and the narrative presentation of research[1]. The approach is controversial in part because of the types of models this group has chosen to use, i.e. rational choice models, but there is embedded in this debate an emerging epistemology that can contribute to the debate in accounting over the use of narrative and its relationship to formal modeling and quantitative analysis.

This paper provides a brief overview of the analytic narratives project (Bates et al, 2006) in political science/historical sociology and illustrates the analytic narrative approach by application to Lee's (2006) counterfactual history of the UK accountancy profession. Analytic narratives are an attempt to apply general theory to specific

[1] Denzin (1994) distinguished between analytic and storied narrative analysis. His "analytic narratives" referred to positivist use of narrative data (e.g. content analysis) and is distinct from the approach developed by the analytic narratives project.

historical cases in a way that blurs the distinction between ideographic and nomothetic research; allowing historical detail to inform theoretical development and theory to provide structure and mechanisms to historical narratives. Although the analytic narratives project is anchored in rational choice theory, the ontological and epistemological assumptions of analytic narratives can be separated to contribute to the continuing debate about and exploration of methodology in accounting history and small sample research.

The paper is structured as follows. I begin by discussing the developing relationship between theory (or, more modestly, models) and historical/small sample scholarship. This is followed by an overview of the analytic narratives project and, specifically, a separation of its ontological and epistemological foundations to better understand its potential contribution to accounting history and, more generally, small sample research in accounting. The use of models in analytic narratives is then distinguished from other uses of models in accounting history particularly in "new accounting history" (Miller et al, 1991) and a typology of the uses of models presented. The relationship between analytic narratives and counterfactual history is then discussed to juxtapose Lee's (2006) approach to constructing a historical narrative to an analytic narratives approach to the same historical timeline. The next section presents a reinterpretation of Lee's (2006) data as an analytic narrative based on a model of signaling in professional labour markets. The paper ends with a discussion of the questions raised about the UK professionalization process from an analytic narratives perspective that remain unanswered in Lee's (2006) counterfactual history.

2. Narratives, Theory and Accounting History

All forms of reporting research involve two basic problems: data reduction and interpretation. The context experienced by the researcher must be condensed and presented in a manner that allows the reader to understand what sources of information were accessed, the strengths and limitations of those sources of data, and the lens that the researcher used to screen the data. Data reduction may be achieved in a variety of ways ranging from creating statistical summaries of quantitative data to providing summary quotations from qualitative data. Since data do not speak for themselves, the results must also be interpreted[2]. Again there are choices in the process of interpretation ranging from comparison of the data against an a priori or theoretical standard (i.e. hypothesis testing) to using the data to infer the sense-making process of actors in the original context (hermeneutics).

The distinction between data reduction and interpretation is, of course, analytic. In practice these problems are resolved jointly and, particularly in historical work, data reduction and interpretation are often embedded in the process of constructing a

[2] Notwithstanding the views of some traditional historians that the data do speak for themselves – "If the historian will submit himself to his material instead of trying to impose himself on his material, then the material will ultimately speak to him and supply the answers" (Tuchman, 1981, p. 23) – data must be explained, that is interpreted, although the basis for interpretation may be tacit.

narrative. A narrative is a "story" that extracts aspects of the data observed by the historian and weaves together a description in which various rhetorical strategies are used to persuade the audience of the veracity of the simultaneous description and analysis (Pentland, 1999). By its very nature, historical narrative is an attempt to provide an understanding of the causal mechanisms underlying series of specific events:

> "…historical narrative - conceived as a thick description of one or more events, in which sequence and outcome are taken seriously and incorporating a creative process of emplotment which accounts for change over time, thereby producing a sense of how and why each event took one form rather than another" Pouallaos (1998, p. 708)

Narratives are the mainstay of the accounting history literature[3]. The use of narrative is a sub-text in the vigorous debate between traditional and new accounting historians (e.g., Fleischman and Tyson, 1997, Funnell, 1996, Keenan, 1998, Napier, 1998, Bryer, 1998). It is recognized that any narrative represents an abstraction from reality. Narratives must simplify the real world, eliminating details that are "irrelevant" and highlighting specific "facts" that are seen as causal factors in an historical process. To use a well-worn metaphor: the map is not the terrain.

> "Does the world really present itself to perception in the form of well-made stories, with central subjects, proper beginnings, middles, and ends, and a coherence that permits us to see "the end" in every beginning? Or does it present itself more in the forms that the annals and chronicle suggest, either as mere sequence without beginning or end or as sequences of beginnings that only terminate and never conclude" (White 1987, p. 24)

The construction of a narrative is thus, at a minimum, a form of data reduction but on what basis are the key factors separated from the irrelevant or trivial? This is primarily where the traditional and new accounting historians part company. Traditional accounting historians "… are not opposed to interpretation but they do assume that it will be tethered in its wanderings to a spike of facts" (Funnell, 1996, p. 48). An additional problem is that the "brute facts[4]" of history left behind in archives and even personal memory represent a biased sample of the reality that generated those data. While source triangulation[5] and the evaluation of source credibility may help to clarify the weight that should be placed on any data, there still remains the possibility of unknown bias and capture by hegemonic forces long past.

By contrast, new accounting historians turn to social and economic theory to help separate the crucial from the trivial and to create a narrative structure within which to

[3] Alternatives to the narrative form of history include chronologies (Zeff, 1972; Knight et al, 1976), oral histories in which informant provide the stories (Emery et al, 2002; McKeen and Richardson, 1998) and quantitative histories reported in scientific formats (Richardson, 2006).

[4] A "brute fact" is one for which no explanation is needed. Of course, one person's brute fact is another person's dependent variable.

[5] I distinguish "source" (or data) triangulation from method triangulation, investigator triangulation and theoretical triangulation following Denzin (1978).

describe specific historical events. This amounts to a reweighting of the evidential value of micro-historical data and macro-social data; the archives are interpreted in light of knowledge about broader historical social processes and current social theory. The new accounting historian, for example, may motivate their choice of historic site and analysis with insights from feminist, Marxist or Foucauldian theory (Lehman, 1992; Cooper and Puxty, 1996; Miller and O'Leary, 1996; Merino, 1998). As will be argued below, this use of theory serves to sensitize researchers to specific aspects of a phenomenon but it is not used to deduce specific expectations to be used as a theoretical benchmark against which historical details might be framed.

The use of narrative by both traditional and "new" accounting histories has been suggested as a basis for rapprochement between the two schools of thought (Funnell, 1996, pp. 38-39). But this rapprochement may be superficial in the sense that one of the characteristics of the new accounting history is to problematize the "text" – both the text used as data and the text produced by the historian – and to subject the use of the text to theoretical development. Walker (2008), for example, has raised concerns that the desire for "confluence" (Fleischman and Radcliffe, 2003) may stultify innovation and growth in accounting history.

In the wider social science literature one of the more interesting developments has been the self-conscious use of narrative as a method rather than simply as rhetoric by combining formal models and narrative analysis. In particular, in political science and institutional economics, narrative analysis has been used extensively to develop the (refutable) view that (a) institutions matter to social welfare, (b) institutions are humanly devised constraints on behaviour (i.e. they are endogenous not an exogenous "brute fact" of history), and (c) institutions are developed to overcome the constraints of uncertainty and bounded rationality. The authors of a number of these studies have reflected on their use of narrative and begun to codify the epistemology of "analytic narratives" (Bates et al, 1998). The purpose of this paper is to provide an introduction to the analytic narratives approach and to illustrate the approach by applying it to Lee's (2006) innovative counterfactual history of the development of the UK public accounting profession.

3. Analytic Narratives

The analytic narratives project is anchored in ontological and epistemological assumptions that should be separated to best understand the potential of analytic narratives in accounting history. Ontologically, the analytic narratives project draws on the work of Douglass North (1981, 1990, 1996) and views actors as boundedly rational economic agents and institutions as the humanly devised "rules of the game" that agents construct voluntarily to overcome problems of uncertainty and opportunism (Levi, 2002). These assumptions place the analytic narratives project within the new institutional economics literature and some of the critiques of their approach are, in essence critiques of this view of human behaviour and institutions. For example, Skocpol (2000, p. 669) begins her critique noting how the analytic narrative project "reveals much about the strengths and pitfalls of rational choice theorizing in comparative politics." While these assumptions are an important aspect of the analytic narrative project, the epistemological innovation in the approach is also noteworthy.

Epistemologically, the analytic narratives project argues that historical understanding is aided by inductively building conceptual models to explain the shift between one equilibrium set of institutions and another, and then deductively predicting events in the specific history being examined based on a systematic investigation of the induced model. The interplay between the expectations derived from the model and the historical record helps to identify key factors that may not have been self-evident, and forces the researcher to consider alternative outcomes and why they may have not have been accessible in the specific circumstances[6]. The work is thus comparative, which is not unusual in historical work (cf. Mahoney, 1999), but provides a framework for exploring the path by which changes occur and suggests alternative equilibrium states (counterfactuals) that must be empirically ruled out in order to provide a convincing explanation for why the actual change happened.

Combining the rational choice ontological assumptions of the analytic narratives project (ANP) with its epistemological commitments to modeling and narratives leads this group of researchers to explore historical change through the lens of game theory. Specifically, the ANP identifies the key players in an historical setting, their resources and preferences, and any exogenous constraints and attempts to model the key choice points as an “extensive form game”. An extensive form game is simply a game (e.g. such as the familiar prisoners’ dilemma game) drawn out as a series of choice points with potential consequences to each choice. The end-points of this branching network of choices are the ultimate consequences of each series of choices that may then be compared to identify which end-point would be preferred by economically rational actors. The researcher then uses backward induction to identify which choices would have been made at each choice point to arrive at the optimal outcome[7]. The research then focuses on the actual decisions at these choice points and the factors that influenced the choices made.

The model derived from the ANP may identify multiple equilibriums and hence sensitizes researchers to look for circumstances that may have diverted actors from the optimum course of action. Note that this approach has some basic similarities with counterfactual histories that ask “what if” but is more systematic in identifying which “if” would have been crucial in changing the migration path from one institutional equilibrium to another.

Watts (1999) distinguishes between the first and second waves of those applying formal theory to case research. The first wave used formal theory without deriving mathematical results (Schelling, 1978, would be an example of this style of analysis) while the second wave typically relies on formal proofs of game theory results to

[6] This allows for path dependence arguments to be specifically identified and contrasted with ergodic causal mechanisms.

[7] As might be expected, the cognitive inability of boundedly rational actors to conduct this form of complex backward induction is also a critique of the approach (Elster, 2000, p. 692)

motivate their narratives. The information demands and hence the constraints on the choice of subject matter are much greater for second wave researchers ultimately affecting the selection of cases to be modeled (Levi, 2002, p. 7). Watts (1999) raises the concern that too much emphasis on the formal use of models as opposed to their use as a conceptual aid may be counterproductive. In particular, the demand for formal mathematical modeling limits the researcher to ontologies that specify well behaved preference functions and behavioural repertoires. For this reason in particular it may be useful to separate the ontology and epistemology of analytic narratives.

The utility of separating the ontological and epistemological assumptions of ANP can be seen in work that is already extending insights from this literature. The epistemological commitment is to develop models of historical processes as a way of better anticipating key explanatory variables and mechanisms, and developing theoretically consistent counterfactuals that sharpen our understanding of actual outcomes. But this set of commitments (as stated) does not require an ontological commitment to rational choice theory or the use of game theory to develop theoretical expectations. Schiemann (2007), for example, argues for a behavioral view of beliefs that allows for "irrational" beliefs to develop when new information is encountered contrary to Bayesian theory. Thus he allows cognitive biases to intervene in the process of institutional change drawing on prospect theory and related theories of systematic cognitive biases. Kiser and Welser (2007), more generally, examine the micro-foundations of analytic narratives and develop the boundary conditions under which the core ontological assumptions are valid.

Even the originators of the ANP recognize that rational choice is not the only way forward: "We are not imperialists if that means believing that rational choice theory is the only possible approach to historical and comparative research" (Bates et al, 2000, p. 696, in reaction to Elster's (2000) critique that the analytic narratives project is driven by "excessive ambition" and economic imperialism). They continue:

> "we use and have a preference for rational choice theory, but it is not a necessary condition for an analytic narrative. For example, one could use instead prospect theory or any systematic theory of individual choice, including non-rational theories of choice, to generate the predictions of individual behavior" (Bates et al, 2000, p. 697).

The key point of their work is thus epistemological rather than ontological. The key point is the use of theory/models to create predictions of what might have happened under the circumstances in order to better understand the historical contingencies at play in real settings. Even their preference for individual choice models (whether economically rational or not) expressed in the quote above, is not binding on their epistemology. Any model that allows specific predictions of outcomes under given circumstances would allow an analytic narrative to be constructed.

Importantly the choice of the model to apply, and specifically the structure of the model, is determined inductively. So when they develop a game theory model to apply to a specific historical setting, it is the observed details of the historical case that determine the structure of the model (for example, the number of actors, the choice points they faced, the incentives affecting each party, and the distribution of resources and other institutional constraints). It may also be that the historical setting causes the researcher to eliminate a case for analysis because it does not meet the boundary conditions of their preferred ontology. This limitation, however, should not stop expansion of this approach to understanding accounting history, i.e. the epistemology of ANP can provide guidance for accounting history studies even if the ontology is rejected on philosophical or empirical grounds.

4. Analytic Narratives and the use of models

The ANP is an example of continuing attempts to develop the relationship between theory and case analysis, or in this case, between models and historical analysis (e.g. Humphrey and Scapens, 1996; Katznelson, 1997; Langley, 1999). Another systematic program of work concerned with this issue in political science is the "empirical implications of theoretical models" (EITM) project (Granato and Scioli, 2004). The ANP has raised concerns among critics because of its pairing of mathematical rational choice theory with an epistemological concern with developing cumulative knowledge from small sample research (Watts, 1999). While many would agree that small sample and historical work would be strengthened by the formal use of models, the commitment to use a model needs to be separated from the question of which model to use.

Models can serve many purposes and be used in many ways in historical and small sample research (LLewelyn, 2003). A useful typology is to think of models as foundational, structural, generative, explicative or predictive (Clarke and Primo, 2007; see Table 1[8]). Foundational models help to define a class of problems; they layout the basic ontology on which a program of research is based. Structural models organize our current knowledge, providing typologies that facilitate recognition of variations in causal mechanisms or identifying key contingencies. Generative models are provocative; they provide novel paths for future research often by reinterpreting existing empirical knowledge. Explicative models help us to identify causal mechanisms underlying phenomenon based on an accepted theoretical perspective. Predictive models are classic hypothetico-deductive models that provide testable propositions. There are examples of each approach or use of models in accounting history work.

[Table 1 about here]

In accounting history to date the most common use of models has been generative. Most of what has been labeled as "new accounting history" (Miller et al, 1991), for example, consists of a reframing of an accounting history episode from the perspective of a specific social theory to demonstrate the potential of the perspective to

[8] This typology is not intended to be exhaustive. Clarke and Primo (2007) for example suggest "normative models" as an additional category. The list is intended to capture the most common uses in the political science literature; these categories also have face validity in the accounting literature.

open new insights into the use of accounting. In some cases, early use of social theory has been very loose – metaphorical (Llewelyn, 2003) – designed more to raise issues than to derive predictions. The critique of the "new history" by traditional accounting historians can be interpreted as a disagreement over the type of model that should be used in accounting history (as well as fundamental disagreements over epistemology) and/or disagreement over whether models should play a role in historical scholarship at all (see Keenan, 1998, and related commentaries on this article).

The key criticism of "traditional" accounting history by "new accounting historians" is that it consists of a series of "just-so" stories. The "just-so" stories of Rudyard Kipling are fantasies for children about how things came to be: for example, how the camel got its hump. The term "just-so stories" has been used to refer to explanations that are teleological, ad hoc and, usually, empirically unfalsifiable. Conversely, a similar concern has been raised about the loose use of social theory in case studies and historical research. Llewelyn (2003, p. 685), for example, warns:

> Empirical case studies using grand theorisation can become merely carriers of an identical prior understanding and, hence, any distinctive new themes … in empirical work can be missed, as they are preemptively absorbed into the pre-existing theoretical framework.

The new accounting history often attempts to avoid the "just-so" critique by adhering to a non-linear, non-equilibrium view of history. In essence, if social theory is used as a sensitizing device and a means of deconstructing received explanations of history, then it cannot be accused of rationalizing what has been known to happen. There is typically no claim that a new accounting history narrative constitutes a definitive explanation of historical events. Events are seen as multiply determined and any reading of events is seen as an interpretation that expands dialogue rather than triangulating on a preexisting truth. On the other hand, this approach to the use of theory does not provide a basis for research to contribute to refining or confronting the theory that is being used as an orienting framework (recognizing, of course, that in some perspectives their epistemology does not recognize the possibility of cumulative knowledge).

It is less common in accounting history work to see models used in an explicative or predictive way. The ANP is an attempt to use models in this manner. Although ANP studies are often written in hypothetico-deductive rhetoric, since they deal with historical material, "prediction," in an experimental sense, is impossible, i.e. events have already happened and cannot be predicted as a future occurrence. However, ANP is developing a self-conscious attempt to move both from the theory to the empirical case and back to theory. As Humphrey and Scapens (1996, p. 91) note, too often the engagement with theory in case analysis is one-sided:

> "Relying solely on the content of a preselected social theory necessarily forces the researcher to work out from the theory, leaving it unchallenged and resulting in a failure to develop a theoretical framework focused explicitly on the issues and questions raised by the case".

Theory is used “in a metaphorical fashion” (Humphrey and Scapens, 1996, p. 92); researchers do not use the theory to anticipate aspects of the case and consequently cannot use the case material to challenge theory (see Richardson and Kilfoyle, 2009, for an exception). The key to the productive use of theory in case analysis is to construct theoretically informed counterfactual histories that can be contrasted with actual events in order to refine our understanding of the case.

5. Analytic Narratives as counterfactual history

Although counterfactual history has a checkered reputation, particularly due to its use in writing historical fiction, it has been recommended as an approach to research on accounting history (Previts et al, 1990a, b) and has been explicitly applied to the professionalization of UK accounting by Lee (2006). A counterfactual history is an attempt to understand what actually happened by speculating on what would have happened if key factors had been different. Counterfactual history thus moves away from deterministic accounts to consider seriously the role of contingency in the unfolding of events. The difference between “good” and “bad” counterfactual histories is the use of theory or a model that allows one to identify the key factors and to theorize the consequences of changes in key factors on the path of events that depended upon this initial condition (Bunzl, 2004). Bunzl (2004) specifically describes Avner Grief’s contribution to the ANP as an example of “good” counterfactual history.

Lee (2006, pp. 924-925), drawing heavily on Ferguson (2003), sets out six criteria that mark a good counterfactual for historical analysis:

- “A counterfactual must not be the product of its author’s contemporary preoccupation and retrospective wishful thinking…
- A counterfactual should be based on what was known at the time …
- A counterfactual must not involve a trivial substitution that is then argued to have enormous consequences.
- A counterfactual must be supported by credible evidence …
- A counterfactual must be clearly associated with a plausible question … The historian must only consider an option or forking path as a counterfactual when it is reasonable to assume it was considered at the time of the actual fact.
- The counterfactual historian should therefore properly site a counterfactual in terms of issues that were apparent at the time of the actual event”.

Lee’s (2006) criteria thus require that counterfactual histories be embedded in the historical context, consider real choice points faced by the actors involved, and then, based on evidence of consequences, derive the event path that would have followed from the counterfactual choice. The approach is thus a model of open possibilities constructed from an initial fixed decision point. The intent is to understand the consequences (outcomes avoided) of the original decision by tracing the consequences of an alternative decision at that point in history. This view is consistent with the extensive form game underlying ANP but in a restricted form.

A counterfactual history recognizes the contingent path of events conditional on an initial choice. As it moves forward from this initial choice it follows the branches of an extensive form game conditional on the author's analysis of the choice at the initial point but ignoring any second-order counterfactuals or other decision-tree branches that might be opened by the change in the initial choice. ANP differs from this approach in sketching out the entire decision tree in order to evaluate the potential endpoints of the game. In essence, the process described by Lee (2006) requires that after the counterfactual choice is made, actors behave rationally from that point forward leading to an outcome that can be considered "reasonable" by the author.

Where ANP would further constrain counterfactual history is in the process of backward induction from a theorized equilibrium state to the point of origin of a historical episode. The ANP is not a Whig history; it derives one or more theoretical equilibriums based on rational choice assumptions and then compares actual events with these outcomes and decision paths. If actual events vary from theoretical expectations then effort is expended to understand the factors that prevented the theoretical outcome from occurring. If the model provides predictions consistent with actual events, then the model is held to be a reasonable representation of the mechanisms driving events (subject to further refutation). The intent is to use counterfactual histories to test the theory used to identify the equilibrium states and to challenge historical understanding by specifying the mechanisms by which decisions are made (Levi, 2004).

6. Applying Analytic Narratives to Lee's (2006) Counterfactual History

To return to Lee's (2006) setting, i.e. the effect of Royal Charters on the professional project in the UK, an analytic narrative approach would insist on developing the "game" being played by accountants at the beginning of the professionalization process. Three choice points are evident in the history provided by Lee (2006): the decision to seek or not to seek a Royal Charter, the decision to seek registration legislation for public accountants or not to seek such legislation, the decision to merge associations or not to merge. The missing elements in Lee's work compared with an analytic narrative perspective is the explicit (inductive) development of the extensive form game with the likely payoffs for different actors, the identification of possible equilibrium outcomes, a backward induction from these equilibrium (deduction), and an exploration of events and historical factors that cause deviation from the deductive expectations of the model.

Figure 1 represents the choices set out in Lee (2006). The problem can be "defined" (i.e. inductively constructed in a simplified form) as a strategic game involving three actors: high-status public accountants, lower status public accountants and the state. The problem is initially a labour market signaling problem (Spence, 1974): the market for accounting services was growing and profitable, there was quality uncertainty in this market[9], the increase in social and capital mobility undermined traditional means of providing quality assurance regarding accounting professionals[10]. In this setting the state plays the key role of providing several possible signals of quality that can credibly be used to differentiate qualified and unqualified practitioners and may confer monopoly privileges in concert with some signals. In a liberal democracy however any grant of special legislation to a group that endows them with privilege is subject to public scrutiny and potential electoral reprisal.

[Figure 1 about here]

The creation of a professional association and obtaining a Royal Charter was seen as a way of signaling the quality of certain accounting practitioners compared with others. A signal is effective if it is correlated with the underlying quality (or is accepted as a signal of quality and quality cannot be determined ex post) and is costly to duplicate. The Royal Charter is a mark of quality that was granted, and protected against fraudulent use, by the state. The grant of a Royal Charter, however, occurs without a specific test of competence hence it is really based on social status which it is assumed in the market to be correlated with professional skills.

The second decision may be defined as a continuation of the signaling game but with a change from a labour market signal (Royal Charter) to an index (i.e. assuming that registration is contingent on a job-competency-related test of skills[11]). A signal is a symbol that is associated conventionally, i.e by social agreement, with an underlying state while an index is an indicator that arises directly from the underlying state itself. Registration implemented on the basis of a test of competence could level the playing field for equally qualified practitioners by creating a mechanism/institution that indexes quality among accountants. The additional payoff associated with registration is that it provides monopoly power over the services provided as well as an index of the quality of service. The granting of monopoly power raises the cost to the state of allowing this type of legislation; specifically, if the monopoly granted raises the costs to others in society, there may be political backlash against the government. Registration is usually intended to provide a minimum level of quality for those licensed to practice so the possibility of signaling quality differences within the registered group still exists.

The final decision point is a monopoly problem: a merger represents a trade-off between any economies of scale associated with creating an industry wide monopoly versus the loss of the existing monopoly premium built into any signal enjoyed by

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[9] Quality uncertainty is particularly problematic in markets such as the attest market where ex post it may still not be possible to determine the quality of the service provided, i.e. it is difficult to detect an audit failure in the absence of a business failure.

[10] Traditional means would include personal knowledge of a practitioner and their competence/ethical standards and the embeddedness of an individual in a community capable of defining and providing sanctions for “unprofessional” behaviour.

[11] This is a strong assumption and many studies have suggested that testing processes contain biases that affect the distribution of economic and social opportunities across groups in society. These studies largely concern the addition of irrelevant dimensions to a supposed index rather than the complete irrelevance of a test to the underlying dimension (cf. Bourguignon and Chiapello, 2005).

existing associations. The creation of a single professional association from associations with long histories also raises issues of professional identity that may complicate merger negotiations (Richardson and Jones, 2007). This decision appears to be different in kind than the two previous decision points although it may be seen as an extension of the desire for monopoly power embedded in the registration decision.

Although specific payoffs cannot be attached to each of the endpoints in this game, it can be reasonably argued that the payoffs will vary depending on the status of the accountant. Specifically, high status accountants will generally prefer an endpoint that allows them to continue to signal their social standing/quality and to receive a price premium compared with lower status accountants. Both groups will generally prefer registration as this confers an economic monopoly which will benefit all practitioners however there are distributional issues associated with this outcome. Registration will only be preferred by high status groups if registration allows continued differentiation of the high status accountants from lesser qualified accountants. Registration does not ensure that all registered accountants are equal, merely that they have all met some minimum quality standard. Merger will be preferred by lower status accountants as a way of blurring quality differences but will be resisted by higher quality accountants if merger undermines the premium associated with the signal of quality that they developed. A merger will benefit all groups if it allows economies of scale in association activities and increases the lobbying power of the profession with respect to the state.

These payoffs suggest that some endpoints of the game are not feasible, i.e. they would not be supported by any group. For example, outcome "H" where the profession is fragmented with no signaling of quality differences and no state granted registration would not be preferred by any group and hence can be eliminated as a serious possibility. Similarly, outcome "C" where associations are merged even though registration has not granted and strong quality signals are present seems highly unlikely because of the loss of payoff to the high status accountants without any corresponding benefit. Overall, the terminal point that seems to allow the highest payoff to all groups would be outcome "B" where registration is achieved in the context of a signaling regime that allows differentiation of quality among registered accountants. The analytic narratives approach thus challenges the historian to account for the failure of accountants in the UK to achieve this outcome.

Referring to Figure 1, Lee (2006) identifies outcome "D" (Royal Charters for some associations, no national merger of associations and unsuccessful registration drives) as the current state of affairs. His counterfactual analysis suggests that if a Royal Charter had not been granted at the first choice point then the most likely outcome would have been "E" (no Royal Charters, national unification and registration of public accountants). Lee (2006, p. 938) presents his counterfactual analysis in terms of the reasonableness of his speculations although he is ambivalent about the nature of the counterfactual outcome:

> "Some readers will argue that the actual historical outcome evidenced in this paper is preferable to the alternative offered – particularly those

> preferring a professional world in which no single body has the opportunity to monopolise relationships with the state and regulatory bodies. Other readers may take an opposite position –, e.g. those who see a single body as a more effective control over public accountancy services and providers. That, however, is not the purpose of this paper. Whatever the preference is about the historical outcome, the aim of the paper is to introduce counterfactual reasoning and analysis to the accounting history literature and within the context of a contemporary and significant topic".

The ANP perspective by contrast looks at the whole range of possible outcomes (A through H in Figure 1) to determine which outcomes are plausible given the set of choices and the incentives, and which outcomes are self-enforcing (a sub-game perfect equilibrium or Nash equilibrium). Where the actual events stray from the rational path represented by the game, additional factors must be identified to explain the variance or the structure of the game must be reconsidered.

The initial choice point focuses on the decision to seek a Royal Charter. If this is accepted as a signaling game, then Lee's (1996) counterfactual is problematic. The alternative to the failure to attain a Royal Charter presumably is to seek other signals of quality that would be accepted in the marketplace. Implicitly Lee (2006) takes the position that no other signals of quality were available such that if no Royal Charter was granted, then no, or minimal, quality differentiation among associations/practitioners would have occurred. This assumption is not consistent with his characterization of the group that attained the charter but, for the moment, this point can be ignored. If other signals of quality were available then the question becomes why a Royal Charter should be seen as the preferred signal; if alternative signals were not available, then the question becomes why this labour market failed to provide quality signals.

Lee (2006) convincingly makes three points with respect to Royal Charters. First, obtaining a Royal Charter was "exceedingly difficult" (p. 934) and "time consuming and costly to obtain" (p. 931). Second, the group that initially obtained a Royal Charter was already an "elite" with "considerable influence" (p. 932) at least within Scottish circles (i.e. signals of quality differences already existed). Third, the Royal Charter was perceived as conveying "social status and economic monopoly" (p. 931), although perhaps with greater weight on social status than monopoly power.

Lee (2006, p. 932) argues that the decision to seek a Royal Charter entailed a rejection of the options of "pursuing private legislation (which as uncertain, time consuming and costly), and that of remaining an unincorporated voluntary association." It could be argued that these structural alternatives are also signaling devices that were available at the time and one option, private legislation, also engaged the state in adding credibility to a quality signal. Although Lee (2006) certainly makes the point that accountants had options, he doesn't address the question of why specifically the Royal Charter was chosen. I would argue that the Royal Charter was a signal of professional quality that had particular value in the context of competition by English accountants and less qualified local Scottish accountants because it was based on social standing that was difficult for others to duplicate and was not based on an explicit quality standard (index) that would require taking others of lower social standing but equal professional ability into membership. The Royal Charter also served as a generic quality signal to those within the UK who may not have been familiar with the group's claims to elite status within Scotland. The Royal Charter thus gave the high status group monopoly power with respect to membership in that group and a signal of quality.

Contrary to Lee (2006, p. 933), I do not find that the individual family connections and social status of the group that attained a Royal Charter would have been sufficient to allow the group to proceed without such a signal of quality. This is not to say that a Royal Charter was the only way to signal quality but the essence of a group social mobility project (Larson, 1977; Richardson, 1997) is the creation of some form of "brand" that allows the group to be differentiated from others. In the absence of a Royal Charter, the desire and payoffs to this group of branding themselves would have still existed and would likely have been expressed in another form but with similar results unless there were severe constraints on the availability or efficacy of alternative signaling mechanisms. The fact that the group was already recognized as an "elite" but still sought an additional signal of quality suggests that the key concern was to signal quality in markets (e.g. England) where the local reputation of the group would have carried less weight.

From the state's point-of-view, the decision to grant a Royal Charter, particularly without also conveying a monopoly on practice, was relatively unproblematic. In a society, such as the UK, where class distinctions were marked at that time and political patronage accepted, granting a Royal Charter to a group of influential and well connected practitioners could be seen as a way of rewarding social status without arousing mass political objections. This coupled with "an elite group, a well planned and executed process and, most significantly, considerable influence" (Lee, 2006, p. 972) suggests little state resistance to this application. So at the first choice point, the Royal Charter can be seen as a low cost option from the state's view (particularly compared with registration as discussed below) but with the signaling value sought by the high status public accountants. In the absence of granting a Royal Charter, it seems likely that the incentives to differentiate the high status from low status practitioners would have still existed in the market but it is not clear what alternative signals could have been drawn upon.

The second choice point is the registration of public accountants. This choice point is complex because there are two distinct phenomenon embedded in this event. First, registration would provide a state-sanctioned monopoly and hence, theory suggests, the average returns to practitioners would increase compared with the average returns in a competitive market. Second, registration changes the mark of quality from a signal to an index (whether that signal is a Royal Charter or some other form of branding). Assuming that registration is associated with the creation of a test of competence that each individual must face rather than a signal associated with all members of an association, then registration creates additional cost/risks to individual members. It is possible, for example, that registration would undermine the unity of existing associations by separating registered from non-registered members. In addition, assuming that registration undermines the value of the Royal Charter as a signal, then the cost to those with a Royal Charter is greater than the cost to those in non-Chartered associations. From a rational choice perspective, to convince those in Chartered associations to support registration would require a side-payment to compensate Chartered members for their loss. One way of doing this would be to manage the definition of the scope of regulated practice to coincide with the area of dominance of the high status groups (e.g., exemptions for smaller and privately held companies, distinguishing between the final attest signature and the work done to support such a signature etc.). Since registration is theorized to increase the average returns to the profession these side-payments are theoretically feasible but pragmatically difficult. Signaling theory suggests that we should look for evidence of attempts to construct side-payments and institutional barriers to the success of these payments where registration occurs after a differentiating signal of quality such as a Royal Charter is put in place.

Lee (2006, p. 937) clearly distinguishes between the ability to signal quality with a Royal Charter and the ability to control the market for professional services: "Scottish and English Chartered Accountants were aware of the limitations of royal charters in effecting an economic monopoly." From the Chartered associations' point-of-view, the optimal outcome would have been to make possession of a Royal Charter coincident with registration. This outcome however was politically difficult since a monopoly would affect many current practitioners outside the Chartered associations and would likely raise the cost of services to all clients (including existing clients of members of Chartered associations). The increase in cost to clients would have translated into political pressure against granting legislation creating the monopoly.

Lee (2006, p. 937) argues that registration would have been more likely if no society had been chartered and the profession spoke in a more unified voice. This argument is reasonable. For example, evidence on the Canadian profession suggests that the state directly intervened to unify the profession as a precondition to granting licensing (Richardson, 1988). However, again we have the problem of status differences among associations independently of Royal Charters potentially interfering with a signaling equilibrium that removes advantages held by "branded" associations.

From the state's point-of-view, registration, i.e. granting an economic monopoly, must be anchored rhetorically in the "public interest." This is typically done by suggesting that the public is at risk from unqualified practitioners and that some minimum level of quality is needed to protect them. This quality level becomes the basis for licensing standards and is typically implemented through some form of testing across all potential practitioners (although accreditation processes such as membership in a professional association may exempt a practitioner from this test). Since licensing is intended as a minimum level of quality to protect consumers, it is reasonable to expect further signaling among qualified practitioners to differentiate higher levels of quality. The interaction between the firms and the associations, for example, is one way of bringing in multiple signals/brands into the marketplace. The large accounting firms have always claimed that there is significant competition among them even though they all enjoy the benefits of their members being part of high status accounting associations.

They also claim that they provide higher quality service than smaller firms or independent practitioners based on internal training, quality assurance and intellectual capital.

The final choice point, the decision to merge associations, is also complex. The merger decision makes most sense where registration already exists if the effect is to bring all registered accountants within a single association. This would allow cost efficiencies in the maintenance of the quality of practitioners (continuing education and discipline) and the development of monopsony bargaining between the association and the state over changes to the registration legislation. However, it may also be the case that a unified practitioner group has a greater probability of successfully gaining registration legislation. From a signaling perspective, the merger decision parallels the discussion of registration legislation above. The merger has the potential effect of eradicating existing quality signals. In order for an association to enter into this agreement, it must be demonstrated that the payoff from monopoly power will exceed the loss of quality premium that already exists. Again the possibility of side-payments must be considered for example through differential access to executive positions for high status associations within the merged body, the retention of some mark of status that allow continued differentiation, or the adoption of future entry standards/continuing professional development standards that will provide cumulative benefits over time to the members of the higher status association.

It is also possible that this final choice point may not be amenable to rational choice processes. Richardson and Jones (2007), for example, suggest that accounting association mergers are complicated by the adoption of a “brand” (i.e. an accounting designation) as part of the personal identity of accountants. The decision to merge is thus not a simple economic decision about the costs and benefits of being part of a larger association; it is about the effect of the merger on the individual’s ego. It is difficult to put a cost on such changes and difficult to derive predictions from models of ego-involvement.

7. Discussion

I have engaged with Lee’s (2006) counterfactual history of professionalization processes in the UK as a way of illustrating the potential of analytic narratives in accounting history. I have suggested that the history outlined by Lee (2006) can be usefully modeled as a signaling game in which accounting practitioners attempt to gain economic advantage by adopting signals of quality that are difficult for competitors to duplicate. This signaling game suggests an equilibrium outcome where an economic monopoly is attained that separates unqualified from qualified practitioners based on some state defined minimum level of quality and that within the qualified practitioner group further quality differentiation (branding) may occur depending on the extent of the market and consumer ability to benefit from such differentiation. In Figure 1, this would be outcome “B” (as opposed to the realized outcome “D” or Lee’s (2006) counterfactual outcome “E”).

The analytic narratives approach developed above raises further questions about the historical timeline presented by Lee (2006) such as: what alternative signaling devices were available when the Royal Charter was attained and why were they not used?; why were side-payments to the high status groups not used during registration drives to bring about closure for the profession?; was the market for public accounting services differentiated according to quality in a way that reinforced the status distinctions between associations?; how did the political consequences to the state affect their willingness to support the registration process (i.e. to create the conditions among associations conducive to mergers or some corporatist structure)?

Lee's (2006) counterfactual history is internally consistent and makes reasonable and creative use of the historical record (e.g. reasoning by analogy and considering the boundary conditions under which actual events occurred). Where the analytic narratives approach differs is in making the choice points explicit and trying to identify the (simplified) incentive structure at each choice point. This approach makes clear where Lee's (2006) counterfactual is situated within a set of possibilities rather than restricting the narrative to a single counterfactual history. Walker (2008) has characterized accounting history as an "argument without end," the analytic narratives approach may be one way to add structure to this argument and make clear what key assumptions and models underlie historical interpretation.

8. Conclusion

The analytic narratives project in political science/historical sociology is an attempt to formalize an approach that combines rational choice theory and small sample explanation in a rigorous way. The intent is to use the specifics of a historical case setting (i.e. the actors, their preferences and the distribution of resources etc.) to develop a game theoretic model of the situation confronting decision-makers. Assuming economic rationality of all actors, the researcher solves the game, usually in extensive form, to identify the "sub-game perfect equilibrium" outcome that would be self-sustaining, i.e. a self-enforcing equilibrium. The researcher then uses backwards induction to understand the choice(s) that would have been necessary for actors to move from the decision-point to the equilibrium outcome (typically this is seen as moving from one equilibrium point to another, or from one set of institutions to another). The optimum decision path is then compared with actual events to determine whether the model fits the data and/or whether factors not anticipated by the model have affected the realized outcomes.

The analytic narratives project is a recent example of a continuing attempt to combine models and small sample research. If the ontology of analytic narratives is separated from its epistemology, the approach does provide a useful example to accounting researchers. Specifically, the combination of inductive development of the theoretical framing of a case followed by deductively specifying expectations may provide researchers with an opportunity to ask better theoretically informed questions in small sample research and to use small sample research to contribute to theory development.

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Table 1: The Purposes of a Model (Modified from Clarke and Primo, 2007)

Type of Model	Purpose	Accounting History Example
Foundational	Provide insights into a general class of problems	Bryer (1999) uses Marxist economic theory as a foundation to explain the transition from agrarian to capitalist accounting practices
Structural	Organize empirical generalizations or known facts	Richardson and MacDonald (2002) provide a typology of international accounting history research and link these types to international business theory
Generative	Produce non-obvious directions for further study	Miller, P. and O'Leary, T. (1987) draw creatively on Foucault to reanalyze the history of standard costing and budgeting, and refocus attention on the construction of the governable person
Explicative	Explore causal mechanisms	Shapiro and Matson (2008) explore corporate reactions to internal control legislation between the Foreign Corrupt Practices Act and Sarbanes-Oxley
Predictive	Forecast events or outcomes	Richardson (2006) uses contemporary theory to predict the effect of the Great Depression on auditor/client switches

Figure 1: Lee's (2006) Analytic Narrative