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Abstract: The paper elaborates on one of the formal methods of qualitative analysis - Event Structure Analysis (ESA) - which can capture and unfold the complexity of organisational processes. It is a formal and replicable technique of qualitative data research used for analysing and interpreting events. The method is formal as it uses a set of logical rules to analyse cases. The formal rules produce results that can be replicated and generalised to other cases. The method is qualitative in the sense that it draws on some subjective criteria and understanding of the researcher, and tries to preserve the context of circumstances in which events take place. Using the literature on co-operative enterprises, the paper demonstrates the advantages of using the formal methods to examine the formation process, and to systematise and analyse narrative data collected across the cases (Stevenson & Greenberg, 2000). Event Structure Analysis (ESA) can map causal factors leading towards the formation of a co-operative in a rigorous and replicable way in order to answer the questions such as: What are the similarities between actions which led towards the formation of co-operatives? Can we compare causal factors across the cases to uncover themes in explaining the formation process? ESA is considered appropriate for causal analysis with an emphasis on process and contingency, and conceptualises causal relations as complex conjectures of factors and conditions (Griffin & Ragin, 1994). ESA can be applied to the narrative of a process of co-operative formation to clarify temporal ordering and sequences of actions in leading towards the formation of co-operative enterprises.
Formal Methods of Qualitative Analysis as a Tool for Understanding the Formation of Co-operative Enterprises

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Abstract:

The paper elaborates on one of the formal methods of qualitative analysis - Event Structure Analysis (ESA) - which can capture and unfold the complexity of organisational processes. It is a formal and replicable technique of qualitative data research used for analysing and interpreting events. The method is formal as it uses a set of logical rules to analyse cases. The formal rules produce results that can be replicated and generalised to other cases. The method is qualitative in the sense that it draws on some subjective criteria and understanding of the researcher, and tries to preserve the context of circumstances in which events take place.

Using the literature on co-operative enterprises, the paper demonstrates the advantages of using the formal methods to examine the formation process, and to systematise and analyse narrative data collected across the cases (Stevenson & Greenberg, 2000). Event Structure Analysis (ESA) can map causal factors leading towards the formation of a co-operative in a rigorous and replicable way in order to answer the questions such as: What are the similarities between actions which led towards the formation of co-operatives? Can we compare causal factors across the cases to uncover themes in explaining the formation process? ESA is considered appropriate for causal analysis with an emphasis on process and contingency, and conceptualises causal relations as complex conjectures of factors and conditions (Griffin & Ragin, 1994). ESA can be applied to the narrative of a process of co-operative formation to clarify temporal ordering and sequences of actions in leading towards the formation of co-operative enterprises.

Keywords: Qualitative; formal methods; co-operative enterprises

1. Introduction

The literature on co-operatives has often utilised a historical narrative approach to examine single cases¹ of the co-operative formation and development. Narrative case studies of co-operatives provide detail accounts of the formation process, and are able to capture temporal contingency and establish the context within which actions occur. However, they have been often criticized for focusing on description at the expanse of explanation (Griffin, 1992; 1993). If we assume that that the formation of co-operatives is composed of complex, intertwining sequences of events then the researchers face a major problem of how to organise, systematise and interpret rich empirical accounts of the formation processes across a number of cases. Formal methods of qualitative analysis can be used to examine the factors surrounding formation of a single co-operative in order to determine whether the cases analysed

¹ See the annotated bibliography on agricultural co-operatives (Krivokapic-Skoko, 2002a), or Merret and Walzer (2001).
held any similarities between the co-operatives which successfully finished the formation process.

Recent development in qualitative research methods, such as Ragin’s (1987) qualitative comparative analysis, Heise’s (1981; 1988) and Griffin’s (1993), event structure analysis and Abell’s (1987) formal narrative analysis, demonstrated that qualitative analysis can be systematic, formal, as well as rigorous and procedurally replicable.

Event-Structure Analysis (ESA) is a relatively new formal method of qualitative analysis which has important analytic features. The method offers deterministic rather than probabilistic explanations and generally expresses causal relations as complex conjectures of factors and conditions (Griffin & Ragin, 1994). ESA is considered appropriate for causal analysis with an emphasis on process and contingency, and can be used to interpret cases or events holistically. ESA focuses on a single, culturally or historically specific event, more precisely on a narrative of the event. Actually, ESA is a formal technique of narrative analysis, and tracks the temporal ordering and sequencing of actions in order to explain a singular event (Brown, 2000; Griffin, 1993; Griffin & Ragin, 1994). As such, this particular formal analysis of narrative descriptions of events allows the researcher to rigorously examine processes of organisational formation.

This conceptual paper first outlines the features and strategy of ESA. It is followed by focusing on the formation process of co-operatives. That process is firstly discussed more descriptively using the theoretical and empirical literature and after that the formation process is unfolded using ESA. The main purpose of this paper is to draw an attention to some innovative, formal methods of narrative analyses which would allow the researcher to rigorously examine processes of organisational formation.

2. Event-structure analysis

Event Structure Analysis (ESA) is a formal and replicable technique of qualitative data research used for analysing and interpreting events. It is considered appropriate for causal analysis with an emphasis on process and contingency. ESA is a formal method since it uses a set of logical rules to analyse cases. The formal rules produce results that can be replicated and generalised to other cases. The method is qualitative in the sense that it relies on some subjective criteria and understanding of the researcher, and tries to preserve the complex history of interactions.

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2 A narrative is an analytic construct that is used to identify a group of events and incorporate them into a single story (Stevenson & Greenberg, 1998). Narratives have a specific beginning, a series of intervening actions and an end point which can be based upon a number of paths and interconnection between the actors.
between actors in the context of the unique circumstances in which events take place. Event-Structure Analysis (ESA) is more rigorous than the case studies approach and focuses on the temporal order and sequences of the actions. It provides narrative explanation and goes inside singular events and systematically organises information about events in order to explain how something happens.

ESA was originally developed to study cultural routines (Corsaro & Heise, 1990) and has since been applied to a study of the racial conflicts in USA (Griffin, 1993), labour strikes and causal consequences of labour unions campaigns (Brown, 2000; Brueggemann & Brown, 2003). ESA is seen as very appropriate for analysing complex social processes and collaborative actions (Stevenson et al., 2003). Hager and Galaskiewicz (2002a; 2002b) used ESA to analyse the closure among non-profit organisations based on narratives told by former board members and administrators of non-profit organisations that closed down. Their approach was to use the narratives to study closure as a process or sequences of events and to identify how precipitating events eventually lead to closure of non-profit organisations. They analysed empirical evidence on initial, primal events in the web of events described by respondents as they recounted how their organisations closed.

ESA is particularly appropriate for analysing the organisational development because it focuses on processes and contingency. ESA allows more rigorous narrative case studies by systematisation of the empirical evidence usually gathered from intensive case studies. ESA depicts the interpretation as an event-structure diagram that maps the event's causal flow. By removing extensive description from the narrative case studies and interpretation, causal arguments are now more transparent. As Griffin (1993) argues ESA helps pinpoint critical actions and steps, which are linked very closely to the empirical literature of co-operatives.

3. The formation of co-operative enterprises: Theoretical and empirical considerations

A review of the literature on co-operatives yields numerous definitions of co-operatives (Krivokapic-Skoko, 2002b). A reference from Webster unabridged dictionary defines co-operation as “the association of a number of persons for their common belief, collective action in the pursuit of common well being, especially in some industrial or business process” (cited in Groves, 1985, p.1). Groves also cited definition by a French economist C. Gide who assumed that a co-operative is “a group of persons pursuing common economic, social and educational aims by means of a business”. Gide’s definition, developed many years ago, states that a co-operative is more than a business form, and apart from economic, social and educational aspects of a co-operative are also stressed. These non-economic points are also considered by
Staatz (1984) who defines a co-operative as an autonomous association of persons united voluntarily to meet their common economic, social or cultural needs through a jointly owned and democratically controlled enterprise. Essentially, Staatz (1984, p. 5) considers co-operatives as a form of collective action in which individuals join together to accomplish things that would be more costly or impossible to accomplish individually. According to Le Vay (1983) the basic blocks in defining a co-operative are that it is an association of persons (either individual people or institutions) who work together to achieve certain commercial objectives.

Obviously, there are many overlapping properties of the definitions mentioned above and therefore, some authors focused on deriving common denominators in defining agricultural co-operatives. In an attempt to integrate divergent views on co-operatives Helm (1968, p. 5) used common elements of the various definitions and conceptualised a co-operation as a voluntary organisation of economic units, based on equality, carrying out allocated or self-given objectives. Finally, Nilsson (1998) listed three common denominators characterising most of definitions of co-operatives. These are: (1) cooperation is an economic activity, which is (2) conducted for the common need of members, and (3) is owned and controlled by these members themselves.

A review of some recent research on co-operative reveals the particular interest in the formation of co-operatives (Cropp, 2001; Stefanson et al., 1995; Waner, 2000). According to Cropp (2001) the most difficult tasks in creating a co-operative are (1) obtaining finance, (2) keeping members interested in participating, and (3) providing a clear vision. Some other problems which can be relevant for the traditional co-operatives are the flexibility to deal with diverse groups, and the presence of the outside agents or coordinators who link resource and information, and resolve conflicts (Stefanson et al. 1995). Furthermore, Stefanson et al. (1995) identified some other critical elements of the formation process such as: (1) supportive local government; (2) financial institutions; (3) professional management team; (d) co-operative development facilitators; (4) committed group of producers; (5) consultants; (6) researchers/ University; (7) rural development workers, and (8) community organisations. Similarly, Waner (2000) outlined the presence of informed and knowledgeable facilitators, dedicated and organised groups of producers, successful and effective management, a strong business plan, and supportive financial institutions, as common critical factors in starting a co-operative. As Stefanson et al (1995) showed a successful facilitator should (1) know enough about the business development in order to encourage the establishment of a sustainable co-operative; (2) have the organisational skills to bring diverse personalities together and create cohesion and solidarity; (3) be enthusiastic about co-operative solutions, and (4) allow the co-operatives to form and make decision on their own. As the experience of new generation co-operatives also shows...
government agencies play the important role in the process, acting as advisers, and encouraging a positive attitude towards establishing a co-operative (Ibidem). The co-operative literature (Cropp, 2001) also indicated that there is a champion behind a successful formation of a co-operative and this is usually someone who is: (1) enthusiastic about the potential benefits of a co-operative, (2) respected by the community, and (3) has leadership abilities.

It was empirically shown (Stefanson et al., 1995; Cropp, 2001) that the presence of the outside agents can provide the group with linkages to resources and information. Facilitators and co-operative development specialists work as project coordinators and are an important link between producers groups and outside resources. A strongly motivated central core group can assist the formation process by coordinating the development efforts, creating an atmosphere of enthusiasm, linking producers, resources change agents, government and other already established co-operatives. Some authors such as (Herman, 2003) consider the co-operative ventures, as innovative models and as such their adoption requires support by a variety of agencies, which can play an important part in facilitating diffusion and adoption of innovative responses by producers. These agencies may be already established co-operatives, government agencies, universities, lawyers, accountants, financial analysts, business consultants. Finally, the formation of co-operatives can be seen as the process of planned social changes (Stevenson et al., 2003) where these changes would involve government agencies, community activists, industry representatives, and usually these agencies would evolve into a web of relationships.

Generally the literature on the co-operatives (Krivokapic-Skoko, 2002b; Fulton, 2001) suggests the nine steps in the formation of a co-operative, and these are:

**Step 1: hold an organizational meeting and form a steering committee;**
This step involves pulling together a core group committed to the co-operative idea and collecting information and identifying the need for a co-operative. A core group (3-5 individuals) should form an information meeting for potential co-operative members and the community. At this stage of the formation process it is necessary to reach the shared vision of the group regarding the nature and importance of the problem and how a co-operative is going to address it.

**Step 2: hold a public meeting;**
The objective of the meeting is to establish whether there is a public support for the co-operative. The core group will present its preliminary findings - what is perceived as the common need, why a co-operative will meet that needs, and finally benefits and limitations of co-operatives. The key issue is to identify if there is sufficient interest, and also if there is a
sufficient number of individuals and organisations who will join and support the co-operatives as active members.

Step 3: conduct a feasibility study;
The objective is to survey potential members and potential markets in which the co-operative will operate.

Step 4: Hold a meeting of potential members to report on the results of the feasibility study;
The key issue is to discuss the report and the ability of the steering committee to respond accurately and honestly to the questions is critical.

Step 5: Prepare a business plan

Step 6: Establish the rules on how a co-operative will organize itself

Step 7: draft legal documents

Step 8: Hold a formation meeting

Step 9: Start/registration of a co-operative

Obviously, the initial steps (a co-operative idea or the establishment of the core group) are seen to be the most critical ones. The later steps such as preparing business plans and drafting legal papers are much formalised and relatively easier to carry out. The next section attempts to unfold these essential initial steps of the formation process and to outline the possible narratives of the formation process.

4. Unfolding the narratives of the formation of co-operative enterprises

Event Structure Analysis can be applied to the narrative of a co-operative formation to clarify the causal linkages among the events (Stevenson & Greenberg, 1998; 2000). ESA relies on a narrative approach which assumes that that the formation is composed of intertwining sequences of events, not only linear steps as recommended by the manuals for the formation of co-operatives. As such, ESA is considered an ideal approach for developing dynamic explanations of the formation process.

As the literature on co-operative theory and practice argue we have to advance our understanding of the process and sequences of events that unfold during a formation of a co-
operative organisation. These processes are complex because they are often composed of the actions by many individuals and groups. Actions by individuals or groups can be parallel, multiple, and divergent. Those actions also can be sometimes contradictory, occasionally unsuccessful sequence of actions. Creating a diagram of how these events are linked to each other should give an analyst the insights into the formation of co-operatives as a planned social process.

Table 1. Events Leading to the Formation of a Co-operative

<table>
<thead>
<tr>
<th>ESA code</th>
<th>Description of Action</th>
<th>General Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corg</td>
<td>A core group is formed</td>
<td>Precipitating events occur (Eve)</td>
</tr>
<tr>
<td>Fac</td>
<td>Facilitators are invited</td>
<td>Precipitating events occur (Eve)</td>
</tr>
<tr>
<td>Agen</td>
<td>Agencies are invited</td>
<td>Precipitating events occur (Eve)</td>
</tr>
<tr>
<td>Meet</td>
<td>A core groups meets to discuss a co-operative idea</td>
<td>Groups discuss problem/idea (Dis)</td>
</tr>
<tr>
<td>Champ</td>
<td>A ‘champion’ is identified</td>
<td>Precipitating events occur (Eve)</td>
</tr>
<tr>
<td>HolP</td>
<td>A core groups holds a public meeting</td>
<td>Groups propose the activity (Pro)</td>
</tr>
<tr>
<td>Feas</td>
<td>A feasibility study is being conducted</td>
<td>Precipitating events occur (Eve)</td>
</tr>
<tr>
<td>Hol1</td>
<td>A meeting to report on the results of Feas</td>
<td>Groups discuss problem/idea (Dis)</td>
</tr>
<tr>
<td>Giv</td>
<td>A core groups gives a suggestion to the potential members</td>
<td>Groups discuss problem/idea (Dis)</td>
</tr>
<tr>
<td>Vot</td>
<td>A steering committee votes</td>
<td>Act occurs (Occ)</td>
</tr>
<tr>
<td>Bpl</td>
<td>A business plan is prepared</td>
<td>Precipitating events occur (Eve)</td>
</tr>
<tr>
<td>Rul</td>
<td>The rules are established</td>
<td>Groups propose regulations (Pro)</td>
</tr>
<tr>
<td>Dra</td>
<td>Draft legal documents</td>
<td>Groups propose regulations (Pro)</td>
</tr>
<tr>
<td>HolFM</td>
<td>Hold a formation meeting</td>
<td>Groups propose regulations (Pro)</td>
</tr>
<tr>
<td>Act</td>
<td>Start/registration</td>
<td>Act occurs (Occ)</td>
</tr>
</tbody>
</table>

In applying ESA the researcher first enters chronological event sequences. After that the researcher links the events in causal chain and later on it is possible to highlight key turning points, parallel streams of action and causal sequences of events. The empirical evidence is gathered on initial, primal events in the web of events as described by respondents as they
Figure 1. The generalised event structure diagram of a formation of a co-operative
recounted how they established the connections and how those connections evolved. Field observations and data are translated into sequences of elementary events, and these events are then developed as a logical structure (Corsaro & Heise, 1990).

Event Structure Analysis can map narrative events or causal factors leading towards the formation of a co-operative in a rigorous and replicable way. The generalised event structure diagram (Figure 1) depicts the interrelations among theoretically relevant actions. The empirical literature on the formation of co-operatives allows to specify more abstract concepts (which are diagrammed on the left side of Figure 1) and link them to concrete events. It seems that a number of actions were precipitating events (Eve) that led to the discussions of the problems or the co-operative idea (Dis). The discussions further led the groups to propose the regulations guiding the future co-operatives (Pro). The concrete events and corresponding abstract are listed in Table 1. The events as outlined in Figure 1 are linked to each other following the literature and generally they followed the chronological sequence. Within a more detailed, empirically based ESA, the researcher should determine if and why these sequences are correct. Also, the connections between some events can lead towards points of divergence or convergence and they may be more complex than outlined in the tentative, general ESA diagram depicted in Figure 1.

5. Conclusion

This article should be viewed as a first step of the ongoing methodological and empirical study of the formation of co-operative enterprises. The event structure diagram of the formation of co-operative enterprises is a map of the event’s causal flow which in this case was developed using the findings from some already completed case studies of the formation process. The diagram based on a chronology of events and the formation process was viewed as a successive series of events. It was assumed that events may be causally linked to each other and also parallel series of events may occur simultaneously. In the next stage of this research a new event structure diagram will be generated by extracting concepts and relationships from the empirical accounts and narrative interpretations.

Event Structure Analysis (ESA) which is grounded in narrative interpretation can be used to develop an analysis that preserves the complex description of the formation process. This, relatively new technique of formal qualitative analysis can be particularly relevant to management and policy makers because they seek explanation in terms of sequences of events involving actors. ESA is considered a very appropriate for developing a framework for the analysis of the formation processes and organisational changes in general. Since combining
the interpretive and the formal analytical approaches ESA can provide very powerful casual explanations focusing on temporal ordering and sequencing of actions.

Creating a diagram of how these events are linked to each other should give the policy makers some insights into the formation of co-operatives as a complex social process resulting from collaborative actions. Through ESA mapping, key patterns and processes of development and their generative causal mechanisms can be identified to guide management and government action. Using the narratives the policy makers can identify both precipitating and patterned events which resulted in the formation of a co-operative.

References


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