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Groups in Theory and Practice

Abstract

Vytautas Magnus University researchers report on their progress in melding empirical research with formal theoretical development. Two aspects of the experience warrant immediate comment. First such a melding leads to substantial modifications of how both empirical and theoretical work are carried out in practice in contrast to the more traditional approaches where observations and theory tend to follow their own distinct paths. Second such integrated activities are more time consuming than anticipated, because the need for quality control in observations and in theorising become evident even at the early stages of the endeavour when practices can still be modified.

This report is in three sections. The first, Overview of the dynamical systems approach, by Rimas Vaišnys, presents an overview of the dynamical systems theory as it is understood in the physical sciences and, to an increasing extent, in the biological sciences. That this theoretical approach has contributed to phrasing and solving problems in such a range of disciplines provides the motivation to apply it in studying subcultures. One of the first contributions that a theory can make to a scientific undertaking is to provide guidance in organising empirical information and, in this activity, one of the first steps is to characterise similarities and differences among the objects being investigated. This section ends with an illustration using actual field data obtained during the project. Once all the information obtained during the SAL project is converted to a suitable form, we expect rapid progress in the application of this methodology.

The second section, Overview of modelling in the investigation of small groups, by Andrius Buivydas, provides an overview of mathematical modelling, a process where the consequences of assumptions made about the structures of the entities being studied are explored. Among the more interesting such consequences is the behaviour of an entity over time or in response to the actions of other entities. This activity broadens the horizons of the researcher by allowing a rapid and self-consistent exploration of what might be, and is, a useful stimulus to further empirical work by providing concrete evidence of what "does not work" in a theory. Because the overview has a didactic nature, only a very simple example of what is called individual based modelling is presented. The imagination of the researcher and the availability of relevant empirical information provide the only limitations to this approach.

The third and final section, Overview of connecting to an empirical base, by Egidija Ramanauskaitė, presents the process by which ethnographic observations are transformed into information and the relations which form the basis for further theoretical analysis that also suggests further observations. It should come as no surprise that the ethnographic

characterisation of even a small group – which is, after all, a complex entity itself – needs detailed and time consuming analysis. Thus, in this section, we present only a fragment of the work done with a small Pagan group studied during the SAL project basing the presentation on just several selected attributes, however, in considerable detail. Such a detailed look shows how it is possible to obtain a meaningful, useful and unambiguous characterisation of real phenomena.

Keywords: dynamical systems, small group modelling, structural ethnography

Section 1.
Overview of the dynamical systems approach

Introduction

Data tell a story on a stage set by theory. One of the long range goals of the SAL project was to understand how groups arise, function and disappear; thus we need to organise empirical information along causal lines. The dynamical systems theory gives us the means to phrase and possibly answer such questions by providing methods to create self-consistent descriptions based on interacting entities. The approach is outlined below in abstract terms to provide an overview which is to be followed by concrete examples.

Key concepts of the dynamical systems approach

Systems theory introduces three key concepts: system, environment and interaction. While that which will be treated as a system can be chosen freely by the researcher, the environment (everything else in the universe other than the system) and the interaction (between system and environment) are strongly conditioned by the initial choice for a system. It is precisely the rigorous enforcement of self-consistency and compatibility among these descriptions that makes it possible to subdivide complex systems into simpler, more manageable parts and yet correctly and completely account for the behaviour of the whole. Thus, with this approach, the whole is indeed the sum of the parts. In the context of the present study, a system will be either a group as a whole or an individual member of a group or even of the broader society. Which viewpoint is taken will depend on the questions of interest and the sources of information. One of the reasons why we chose to use the dynamical systems theory is that it allows us to combine information obtained at different levels of organisation.

The technical symbolic tools used in the systems theory approach are constructed from values, variables (systematic collections of related but distinguishable values) and functions (specified relations among variables) (Luenberger, 1979; Murray, 2005). An ethnographic value, in this context, is a verbal (or, more generally, symbolic) description of a definite, concrete and clearly discernible ethnographic situation which is being observed – the classical "wink of the (left) eye" being a ready example. (The

three words – value, variable, function – used to designate the important concepts are being used in a technical sense and should not be confused with alternate, particularly colloquial usages.) An investigator observes the structure and behaviour of the system of interest and characterises the interactions as being system displays (referred to in shorthand as a 'y' or environmental influences as a 'u' in shorthand). In addition, when one begins to seek unambiguous functional relations between environmental influences and system displays, one may need to introduce system state variables to make single-valued descriptions possible. An empirical investigation consists of a sequence of formal observations where specifically and concretely every observation provides one or more values for the indicated variables.

Since the systems of interest are indeed complex, it is not surprising that any ethnographic study generates descriptions filled with overwhelming details. A key function of the investigator is to identify the important distinctions that an ethnographic study reveals and to encode them as technical values without getting lost in the much more numerous but less important details. An ethnographer's good judgement and professional expertise are the keys to a useful encoding of empirical information.

The important lesson of this section can be associated with eleven words: system, environment and interactions; displays, influences and states; values, variables and functions and self-consistency and concreteness.

A more detailed look at dynamical systems descriptions

The basic concepts underlying the dynamical systems theory can be expressed by the following diagram with the associated mathematical summary:
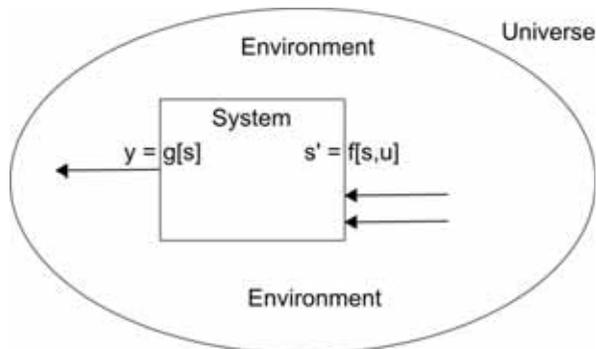

Figure 1. Universe composed of system, environment and interactions.

$y = g[s]$
$s' = f[s,u]$

y – displays System to Environment

u – System influences due to Environment

s – state of System

s' – state subsequent to current state of System

s, y, u – one or more variables evaluated at a given time

f[.] and g[.] – functions (correspondences between values of one or more variables and the values of other variables)

One of the problems in trying to study, describe and understand a complex system is that one is overwhelmed by the amount of information required to describe such a system and its behaviour. The power and utility of the systems theory formulation is that it is possible to take the complex system, to subdivide it into a number of simpler systems (subsystems) whose investigations are more manageable and then to put such partial information together again into a description of the real system. This is achieved by considering each simpler subsystem in turn and treating all the other subsystems as part of the environment for that subsystem. During the subdivision of the complex system, new subsystem displays and influences must be introduced; during the synthesis of the original system, there must be an accounting of these interactions. If the analysis and synthesis steps are carried out correctly and the systems theory formalism is designed precisely to assist these steps, the final result is a correct description of the overall system. This last description is valid to the extent that the descriptions of the subsystems are valid but, typically, attained at much lower effort. The nature of these constructions may be summarised graphically as shown below:
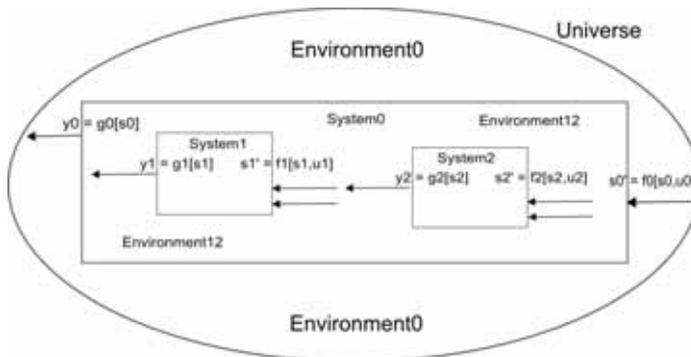

Figure 2. Systems, subsystems and interactions.

Figure 2 graphically displays why and how systems theory is attractive when studying groups. It is possible to shift the viewpoint from group to individual and back again, if needed, without loss of information. System theory provides the basis for individual based modelling, discussed in the next section, as well.

From the above description, it should be clear that systems theory presents a symbolic structure for talking about any phenomena (Casti, 1977). Using the language provided by the theory, one can express almost anything one wishes to say about the world but, for what is said to be true, one needs information that is directly or indirectly empirical. Once such information is available, the formal methods associated with a theory can be used to transform the information in useful ways or to combine one source of information with other sources of information. One of the most fruitful uses of a theory are to suggest, on the basis of limited initial empirical observations and using initial theoretical assumptions, what other sorts of observations might usefully be made. Once such additional empirical information becomes available, it almost always becomes necessary to modify the theoretical assumptions with which one began and then to reconsider the changed consequences for what is observable. This process ultimately leads to a continuing cyclical process of empirical and theoretical activities, each dependent on the findings of the other.

Anecdotal information of varied kinds about the objects of study may be useful in generating possible values but it is of little help in defining variables, even less in characterising functions. To begin constructing the latter structures, critical amounts of coherent empirical data are necessary, so that significant patterns can begin to emerge and productive theoretical activities become possible.

Joining the theoretical and the empirical

One of the first undertakings in which the empirical/theoretical interaction can be productive is by providing natural methods for comparing different systems, be they groups or individuals. As outlined above, an empirical study of a group and its environment leads to a description of the group by specifying definite values for a concrete set of variables. Consider now the situations that can arise if two different groups are being studied.

One extreme case is that the groups exist in a common social milieu and also, informally speaking, seem very similar. Recall the introduced shorthand for variables to be identified by the researcher for the system being studied: 'u' and 'y' are associated with the system. Because of the common milieu, we expect that the 'u' variables of the two groups will be essentially the same, and the values specified for the 'u' variables will also be very similar. Indeed, if the groups really were to exist in identical environments, the 'u' variables and values characterising both groups would be identical. Because we have assumed above that the groups are rather similar, we also expect that they share many 'y' variables, and those shared 'y' variables probably have similar values. (Indeed, if the groups were identical, their 'y' variables and corresponding 'y' values would be identical, and the researcher would

have recognised that he/she was dealing with the same group.) Note that, for similar but not identical groups, some of the 'y' variables characterising the group would be unique to a given group, but presumably the number of such variables would be small, since we assumed the groups were rather similar. The above considerations suggest that, to compare two groups, one might proceed as follows: First we identify shared variables and then compare the values of corresponding variables. Second we identify group specific (unique) 'y' variables and weight their number in relation to the number of shared variables. (Comparing values of different variables makes no sense even if the values themselves are comparable.) The technical details of the above comparisons depend on the specific properties of values and these are introduced in one of the following sections.

Another extreme case that might be considered is that of two different groups that exist in very different societal environments. In this case, the 'u' variables associated with each group will differ, at the very least, in their values (otherwise the environments would not be different) and, quite possibly, in the kind of 'u' variables, with possibly only a small number of common 'u' variables, with the others being unique to each group. This observation suggests that we begin a comparison of the groups by considering their associated 'u' variables: First we identify shared 'u' variables and then compare the values of the corresponding variables. Second we identify group specific (unique) 'u' variables and weight their number in relation to the number of shared variables.

The above discussion of extreme cases is not sufficient to define a unique best method for comparing two groups but it does lead to a well defined, reproducible procedure that can be implemented in the early stages of an empirical investigation of groups. To summarise the overall procedure to be followed, as empirical information becomes available about two or more groups is: for each group, identify their 'u' and 'y' values and organise these collections into a number of 'u' and 'y' variables, with variables common to the groups being compared ('u' and 'y') carrying out a value comparison for corresponding variables and with group specific (unique) variables (both 'u' and 'y') carrying out a weighted variable number evaluation. In a broad sense, the procedure produces results that correspond to our intuitive notions of similarity and difference among systems, and the procedure can be applied both for systems that are groups treated as wholes and for systems defined as individual group members. Once a more complete theory of groups becomes available, other means of comparison may become more desirable but, for initial empirical work, simple and directly accessible methods are probably the most useful. Once some well defined differences and similarities are recognised, one can move to the more interesting work of interpretation.

The differences and similarities that will be found in the empirical data will depend on the resolution at which the observations were made. The ethnographer

naturally is tempted to capture the study object at maximum detail, providing the greatest number of atomic values. A theory, particularly in early stages of development, needs to be as simple as possible and it is forced to ignore much detail when attempting to represent the broader and more stable patterns. Once there is a validated theory, it will provide guidelines to the appropriate balance but, before that level of understanding is reached, the joint intuitions of the researchers will provide the bases for these decisions.

A concrete comparison example

Below we show the results of analysing a small sample of data drawn from two groups investigated during the SAL project.[1] The information was collected through interviews with individual group members; atomic values were identified and arranged in binary variable form. In this presentation, information from five members of each group is presented with regard to 20 variables which were common to the two groups. The columns correspond to questions and rows correspond to respondents. In Figure 3, we present the information about the Vissarion group and, in Figure 4, we present the information about the Skinheads group.
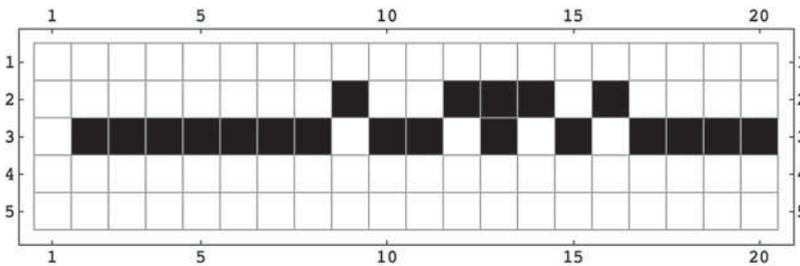

Figure 3. Vissarion responses – each row represents responses of different individuals, columns specify questions.
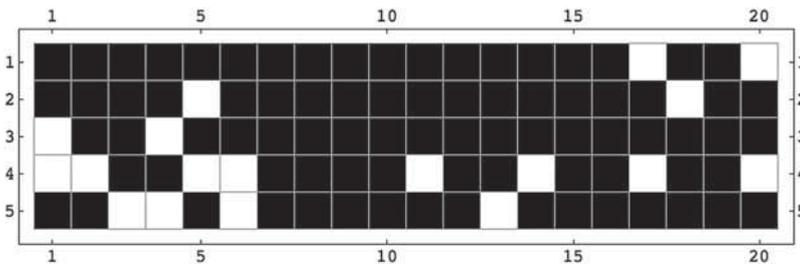

Figure 4. Skinheads responses – each row represents responses of different individuals, columns specify questions.

1   The data was collected and analysed by Rasa Pranskevičiūtė and Tadas Kavolis.

Even a cursory glance reveals not only that the groups differ significantly from each other but also that the internal structure within each group shows very different degrees of heterogeneity. What indices might best summarise different properties of groups is a topic of ongoing research but, in many ways, indicators close to the "raw" data may be most effective. In other words, using patterns to represent information about groups is not only easy and informative but this also guides the researcher to the questions and members that deserve a close interpretative look in the effort to understand subcultural groups.

Systems theory: an aid for policy makers

Policies are created and implemented with certain goals in mind. Policy makers and executors often face the following situation: there is a system of interest which, at a known time, is in some state; this state is one that is undesirable and policy makers propose certain actions that will lead, over some time interval, to a new and much more desired state for the system. The question is: What actions should they take?

Let us illustrate the problem faced in the above case by an example. We are in a lifeboat floating in the ocean. We have oars that will move the boat if we only have strength to use them. Knowing something about the boat, the oars and ourselves, we can estimate how fast we will move and how long we can keep up the effort. If land is in sight and the water is calm, we not only know in what direction to row but we can even estimate how long it would take us to get there. Note that the success of our efforts depends on two kinds of key expectations. The first (a) is that land is in sight and will remain so during our travail. Note that this last statement is really an assumption about the guidance and mechanics of the boat. If fog develops, we still know that rowing will move us but we no longer know in what direction to row (it is an unfortunate fact that humans lose orientation very quickly in such conditions). Vigorous rowing in the wrong direction would be the worst thing we can do. The second important expectation, (b), is that the water currents will remain the same during our journey. If they change, for example, and we encounter strong off-shore currents, all our estimates and bets will be off, perhaps disastrously.

Dynamical systems theory provides guidance in the problems that policy makers face by identifying (and sometimes providing) two sorts of key knowledge or information. First, in the vocabulary of the dynamical systems theory, the policy maker needs to know the state of the system and its dynamical function, at least, to some approximation. (In terms of the example related above, this corresponds to knowing the boat characteristics and fog conditions, as mentioned under assumption a.) Second, again in the language of the dynamical system theory, the policy maker needs to know what the system interactions with its environment are

for the duration of the policy. (In terms of the example, this corresponds to knowing the currents in the course of the voyage, as mentioned under assumption b.) If the policy maker "knows the system" and is able to "control the interactions with the system", he/she not only knows if the goal is reachable but when it is reachable; he/she knows how to reach the goal optimally. This degree of knowledge is atypical for real systems; even if the system is known, the policy maker knows only a small part of the interactions and controls even a lesser part. The interactions coming from the larger environment not under the policy maker's control or knowledge set a limit to what a policy can achieve.

We wish to explicitly repeat, in systems theory terms, what the policy maker is doing in setting policy. Except in those cases where system response is immediate to a policy, the policy maker is trying to make a prediction not only of the system behaviour but also of the environmental interactions over some time span into the future. With even approximate knowledge of the system state and dynamics, something which can be acquired from observations carried out in the past, the policy maker can make useful predictions of system behaviour into the future but only to the extent that interactions are known over this same future time span. When policy concerns goals that take some time to be reached and the policy maker does not control all of the interactions, the policy maker can either guess the time course of these interactions or monitor the interactions and adapt the policy as interactions change. Our short overview of systems theory already suggests, if only implicitly, how to deal with the latter case. To guess systematically and with known consequences, the theory needs to be extended into the probabilistic domain, an activity which falls outside the scope of this study. Nevertheless we offer one comment which may seem counter-intuitive – guessing requires more empirical observation rather than less.

Section 2.
Overview of modelling in the investigation of small groups
Introduction

Modelling is an activity in which the consequences of a set of assumptions are explored (e.g., Hartmann, 1996; Hanneman, 1988; Kluver 2003). If the emphasis is on logical self-consistency without regard for any correspondence to the real world, one has mathematics. If there is concern for the correspondence between what is stated in symbols and what is found in nature, one has science. The "harder sciences" emphasise precision and formal methods to establish causal chains with verifiable consequences, while the "softer sciences" tend to use verbal arguments to construct explanations for patterns as they are found. In addition to these overarching methodological differences, there are topical differences: models are

usually created for specific purposes and concrete systems, and each discipline has its own notions of what is important and how that should be expressed. In an interdisciplinary effort, the participants will know different "facts" and accept different "natural assumptions" and be prepared to argue by different "correct methods", and all these differences must be reconciled if the activity is to be productive. In this report, we present one way of undertaking such a process in which we endeavour to bridge the traditionally distinct approaches. We propose a simple problem and explore its development as clearly and directly as possible. In the following two sections, we present a model of group behaviour constructed from models describing the behaviour of individuals. Before proceeding, we point out that, in modelling, consistency in the selection of assumptions and in the exploration of their consequences is more important than the justification of the assumptions themselves, even though the desire to make theory relevant to empirical results does invite the latter considerations.

In this model, we assume that the multitude of properties that might characterise an individual can be approximated by just one variable whose value, at some time, characterises the individual at that time. We fully recognise that a description of a real individual might involve a great many variables, so this approximation may very well be a poor one, but it is also true that there are useful approximations involving only one variable even for what, in reality, are complex systems. We explore our particular model, because it is simple enough to reach clear-cut results and also because it has not been explored before in the study of subcultural groups.

Because we are interested in a connection to empirical observations, the variable used in the model should be one that describes some important aspect of individual behaviour and is also important in the interactions among members in determining group behaviour. This will be a variable which applies to all group members, but each member may "hold" different values of this variable. Anticipating that we will name the group members A, B, C, we name the corresponding variables sA, sB and sC. In a general case, when we are not interested in the value of the variable denoted to a particular member, we will use the sX notation. To provide a concrete illustration, suppose a researcher is investigating a religious subculture. In that case, the values of the sX variable might represent alternative beliefs about the attributes of a divine being. Another possible candidate variable might be one expressing alternative expressions of a ritual. In trying to relate a model to a real group, it will often be a judgment call for a researcher to decide which variable is more important or what interpretation to assign to the variables. Note, however, that in the context of the model and regardless of the interpretation, the formal structure of the model for an individual will still be that of one variable expressing the assumptions of the person doing the modelling.

The model

To continue with the model development, we comment the assumptions about the dynamics of an individual (e.g., Castiglione, 2006; Gilbert, 2007; Kohler, 2000). We assume that an individual has a preferred value for the variable. If displaced from this value, we assume that there will be a tendency to return to it and that this tendency will be stronger if the displacement is larger, but that there is an upper limit to the maximum effort that can be made. Concretely we assume the following expression describes the dynamics:

$dsA/dt = -Tanh[sA - uA]$

Here the preferred situation for the individual is given by the value $sA = uA$, and indeed the individual will return to this value spontaneously if displaced from it; one can say the individual is true to his/her convictions. The above assertions about the behaviour are necessary consequences of the assumptions we have introduced. If we do not like these consequences, perhaps on the empirical grounds that individuals do not behave that way, then we will need to change the assumptions under which we start the modelling process.

Because we are interested in group phenomena, we need to introduce additional assumptions to describe the way the given individual responds to other individuals. At the level of approximation used so far, we assume that uA is not simply a constant specifying the given individual's preferences but is a function which depends on the values associated with other members of the group. (Observe that we are changing the definition of a symbol and point out this fact.) The modified equations for our individual become:

$dsA/dt = -Tanh[sA - uA]$,

where $uA = h[sB, sC, ...]$ is a function that describes the effects of the other individuals in the group on the designated individual. One of the consequences of this assumption is that now our individual will, for example, settle down to display properties different from those he/she would display in the absence of the other members.

To complete the model of the group, we need to specify the behaviour of every other member of the group. We need to specify our assumptions about every other member of the group in the same way we detailed the assumptions being made about our first member. One of the simplest and most convenient assumptions in this regard would be to assume that all the members are described by identical dynamics, but it is likely that more varied assumptions would be closer to the empirical situation. We introduce this simple assumption not only because it is natural to begin a model exploration with the simplest cases but also to demonstrate that, even when the dynamical descriptions of all individuals are identical, the actual behaviours need not be so.

Implementations of the model

Say we are interested in the behaviour of an individual when no interactions with the environment exist and the individual's preferred value is 0:

dsX/dt = -Tanh[sX] and uX = 0

Not surprisingly, the value of the sX variable will settle down after a while, and this behaviour can be seen looking at Figure 5 (all the figures were created with the help of the Mathematica software package). This is not surprising, because one of the assumptions that we started with was that, in the case of an individual, "he/she has a preferred value for the variable ... there will be a tendency to return to it."
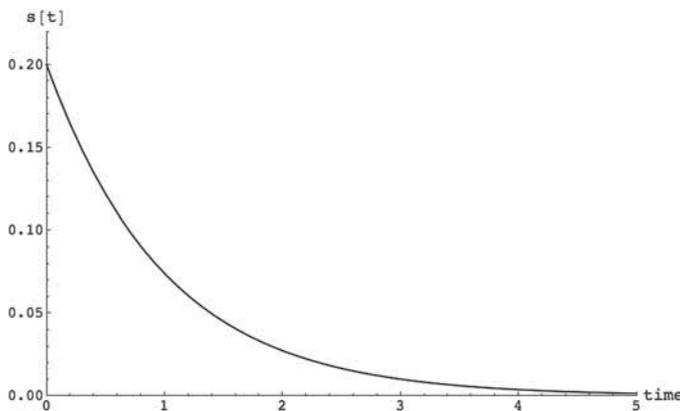
Figure 5. The horizontal axis shows the time,
and the vertical axis denotes the value of the variable sX at each point in time.

Next we ask what the consequences of the model will be if we consider three individuals and assume they interact to form a group. As there are many ways to do that, we have to make a choice among the possibilities and express this choice as an added assumption. Because we are doing the modelling in Mathematica, a convenient way to do this is to define three interaction functions: uA = h[sB, sC], uB = h[sA, sB] and uC = h[sA, sC]. As our first modelling exploration, we explore the behaviour of a group with a "strong leader" – i.e., the first member does not react to the other members at all, and the two other members are passionate followers of the first one (structure pictured in Figure 6). This assumption can be expressed by setting uA = 0.2, uB = sA and uC = sA.
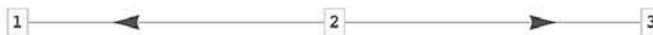
Figure 6. Strictly hierarchical group
with the arrow pointed from the leading member to the follower.

While we might argue that the proposed group is the grossly simplified reflection of some radical religious group, our interest here is more in showing the consequences of the initial assumptions. Figure 7 shows what must happen over time to the values describing the given property of each member. In this simple case, not unexpectedly, all the members eventually acquire the values of the leader.
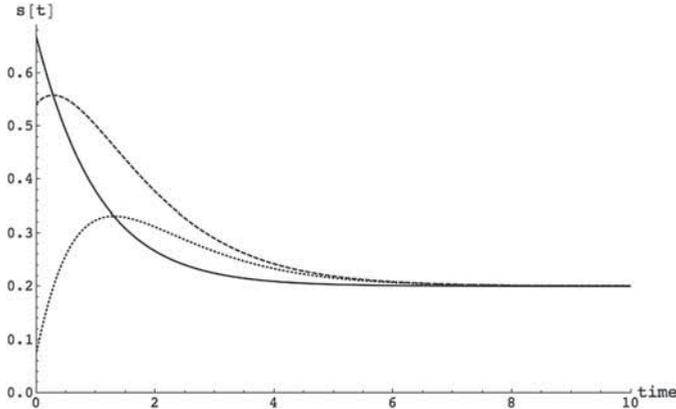
Figure 7. Behaviour of the values of the sA, sB and sC variables
at the initial time {sA, sB, sC} = {0.67, 0.54, 0.07}.

Note that the generation of the figure does not conclude the modelling process. First, in a real situation, we would compare the model results to the empirical observations. If serious disagreement were found, we would conclude that, at least, one of our assumptions is incorrect and proceed to explore models based on alternate assumptions. Second, we might be intrinsically interested in the consequences of different assumptions. For example, having looked at the behaviour of an "authoritarian" group, we might wonder about the behaviour of a similarly sized but more "democratic group". To explore this, we change the assumptions about the interactions among the members (diagrammed in Figure 8) and observe the consequences (shown in Figure 9) when we assume that

uA = 0.2 sB + 0.2 sC, uB = 3 sA + 0.2 sC, uC = sA + 0.2 sB.
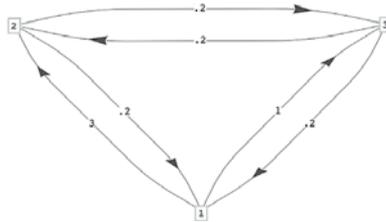
Figure 8. Everyone influences everyone else.
The "weight" of the influence is shown in the middle of the edge.
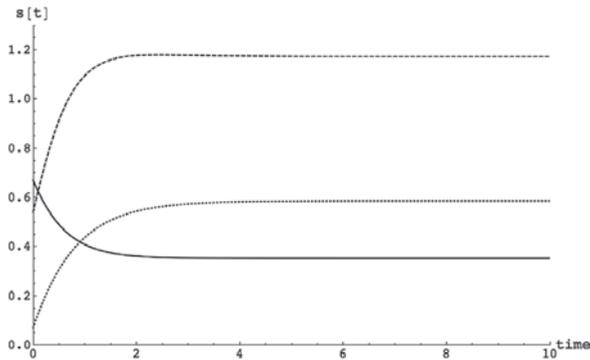
Figure 9. Behaviour of the values of the sA, sB and sC variables
at the initial time {sA, sB, sC} = {0.67, 0.54, 0.07}.

Clearly the behaviour of this group is different from the behaviour of the first group we considered. In addition we now know that the origin of that different behaviour comes from the differences in the interactions within the group.

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Modelling allows us to explore, in a consistent and reliable way, the consequences of our assumptions. The very fact that models are concrete encourages us to express our assumptions clearly; the fact that behaviours are developed from assumptions through formal methods enhances the consistency of proposed interpretations. By providing concrete and definite consequences which can be compared to empirical data, models can help us identify erroneous assumptions and hypotheses about the systems we study. A serious investigation of the nature of such errors often leads to increased understanding.

Section 3.
Overview of connecting to an empirical base

Introduction

The research presented here on the neo-Pagan community (named Earth) was accomplished using the "structural ethnography" method, which we developed on the basis of the systems theory approach and ethnography. This contributed to a refinement of the ethnographic method by the use of the systems theory approach oriented to dynamical analysis which assists in retracing causality in search of an explanation of human behaviour (see subhead, Key concepts of a dynamical systems approach, in Section 1, p. 24). Such a method allows a researcher to explore the structures of meanings and makes them observable. Categories are not imposed from the outside; on the contrary, they may be developed using field materials

(i.e., materials obtained by observations, questionnaires, interviews, conversations and such). This method is applied here to the analysis of group behaviour (it could be also applied in comparing different groups).

Method

The methods of participant observation and in-depth interviews based on a questionnaire that we developed for systematic analysis were used to obtain the data for this research (see Society and Lifestyles Questionnaire, Appendix, p. 276). During the data analysis, lists were developed of the variables regarding *environmental influences on group members* and *group members' expressions* that contain corresponding lists of values. This was a helpful tool for observing and comparing ethnographic materials.

Fieldwork data are organised in the tables that express the information which had been structured using the systems theory approach. There is a separate table for each variable indicating the meanings that originated during communications by group members with one another as well as with the environment outside the group. The pairs of tables (e.g., Table 1, Table 1.1 and so forth) represent meaningful relations among group members and with their environment outside the group. The tables provide a great deal of information; however, in this report, we can describe only selected fragments which serve as examples for the analysis of behaviours by group members.

Constructing lists of empirical values

The term *value,* as used in this report, corresponds to the concept of *category*. Empirical values (e.g., a description of group member behaviour in terms meaningful to the respondents and quotations from texts of respondent interviews) correspond to *emic* categories, and reduced values (familiar to the observer) correspond to *etic* categories.

In the first stage of work, lists are made of empirical values which aid in identifying the variables relevant to the behaviour of the group under investigation.

Thus values are indicated by the essential quotations from the interviews and questionnaire (e.g., the ones relevant to Pagan ideas, ritual practices and such). Data from the interviews/questionnaire along with fieldwork experiences allow the researcher to assign values to the variables of expression or of environmental influences on a group. The self-expression variables are denoted as 'y' and the environmental variables as 'u'.

Analysis

It was found that the list of variables relevant for analysing the behaviour of the Pagan group under investigation is the following.

- The 'u' variables of environmental influences as perceived by group members are:
    1. Environmental influences relevant to the Pagan worldview
    2. Societal reactions to the "public relations" by group members
    3. Other Pagan community attitudes towards group members
    4. Societal attitudes towards group members
    5. Members who dropped out of the Pagan community
- The 'y' variables of public self-expression by group members are:
    1. Assertions by Pagans
    2. Group member activities relevant to their spiritual influence on society
    3. Challenges to the leaders of other Pagan groups
    4. Challenges by group members to society
    5. Self-confidence of group members
- The 'u' 'y' variables of relations within the group are:
    1. Agreements and disagreements
    2. Roles within the group

The following list of Values 4, 6, 7 and 14 for the variable, Environmental influences relevant to the Pagan worldview (see Table 1), is given as an example as follows:

{4. u~R3~ E5 thinks that Paganism manifests itself in songs.}
{6. u~ R3~ E5 says that they are a religion.}
{7. u~ R4~ In other communities there might be more of that romantic belief {u~ R4~ In the Rain community, there might be more of that romantic belief; u~R4~ Some began to ascribe to natural phenomena such gods and goddesses, which are similar to people, such as Thunder, Earth, Fire, etc.}}
{14. u~R4~ E1 In Thunder… they have introduced the so-called baptism, even the pagan one.}}}.[2]

Worldview development

The 'n' and 't' values in the tables below show the environmental influences on the self-understanding of group members as Pagans (Table 1) as well as the formation of the idea of Paganism by group members (Table 1.1).

These tables present the relations between different values of variables. The column headings label the important environments (E1, E2, E3, E4, E5 and Others)

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2   Citations by interviewees are translated almost verbatim and do not necessarily adhere to good English practices.

and the group members (R1, R2, R3, R4). The entries in the first column label these values: 1) nature of the perception of environmental influences relevant either to *environmental factors* or to *group members* and 2) assertions expressed by group members. The possible values at the intersection of rows and columns are either 'n', 't', '+' or '?' and, when inapplicable, the intersection is blank.

These markings signify:

'n' – no (or a negative attitude of a group member towards the environment)

't' – yes (or a positive attitude of a group member towards the environment)

'+' – identification of a specific environment and its value

'?' – value is not identifiable.

Table 1. Environmental influences relevant to the Pagan worldview

	Others	E1	E2	E3	E4	E5	R1	R2	R3	R4
4						+	n	n	n	**t**
6						+	n	n	n	n
7			+				n	n	n	n
14				+			**t**	n	**t**	n

Table 1.1. Assertions by Pagans[3]

	Others	E1	E2	E3	E4	E5	R1	R2	R3	R4
1							t	t	t	t
2							t	t	t	t
3							t	t	t	t
8							t	t	t	t
9							t	**n**	t	**n**
11							t	t	t	t
12							**n**	t	t	**n**
13							t	t	t	t
15							t	t	t	t
16							t	t	t	t
17							t	t	**n**	t
41							t	t	t	t
42							t	t	t	**n**

The 'n' and 't' values in the tables above were identified by modelling the behaviour of every member of the group. When the researcher communicates with a member, e.g., Respondent R3, all other members are considered as the environment of that member. When the researcher communicates with Respondent R2, all the other group members (including Respondent R3) are considered as the *environment*. The

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3   The environmental columns (E1-E5 and Others) in the tables displaying the variables on self-expression by group members are blank.

aim of the researcher is to reveal the values which show relations among group members and highlight their influences on each other. The presumption here is that the group members create their symbolic reality by means of their communications with each other as well as by the environment outside the group.

Individual conceptualisation of the Pagan worldview (Table 1)

Table 1 presents information about environmental influences on particular group members under investigation regarding Pagan worldviews. The environments that group members reflect as being influential are as follows:

E5 and E3 refer to members of another Pagan community who declare the religious origins of Paganism, partake in Pagan baptism and think Paganism manifests itself in folk songs and rituals.

E2 refers to Rain (yet another Pagan community) where there "might be more of a fanatical belief in gods and goddesses".

Reviewing the 'n' and 't' values in Table 1 assigned to our group members (Respondents R1, R2, R3 and R4), it can be seen that the dominant value is 'n' (meaning no or negative). This means that the respondents tend to have their own understanding of Pagan practices which differs from the environment (E2, E3 and E5). The environmental values (marked as '+' on the left side of Table 1) correspond to the particular characteristics of E2, E3 and E5 from the points of view of the group members.

The value 't' (Table 1) assigned to group members, Respondents R1, R2, R3 and R4, means that some of the group members have different points of view. These differences can only be interpreted in relation to the information obtained during participant observations. We know that Respondents R3 and R1 (as well as a few other group members) follow the concept of Paganism that relates to the energy of nature, the universe and humans. This helps to explain their criticisms of other Pagan communities who are oriented to a "belief" in the gods and have strong rituals. However, Respondent R3 seeks to be accepted by the leader of this aforementioned community with strong rituals, since this man is also a respected leader of the Pagan movement throughout the country. While communicating with the group members, it became evident that Respondent R1 also agrees with Respondent R3 (14/R1, R3).

Thus it can be concluded that group members tend to approach Paganism differently and distinguish themselves from the other Pagan groups. Nonetheless, these other groups constitute a significant cultural environment for the members of the community under investigation, an environment that sustains its understanding of Paganism.

Pagan realities and sub-realities: towards individualisation (Table 1.1)

Table 1.1 shows the similarities and differences in what members of the Pagan group under investigation assert about Paganism. In the community, there exists "such a particular respect for nature, such an aspiration for the preservation of heritage and the spirit of Paganism." The members consider themselves the energy (Values 1-8 in Table 1.1). The main assertions concerning the Pagan worldview by the members are similar; however, they engage in different cultural practices.

The 'n' value in Table 1.1 shows a distinctive point of view by group members on Pagan practices, a view which is characteristic of what other group members perceive. For example, Respondent R4 has no interest in the meanings of the natural calendar holidays which were presented as a main activity of the group by Respondents R2 and R3 (42/R4 in Table 1.1). The idea, "to find true ethno-cultural roots which would be grounded in scientific knowledge, especially physical laws", is not considered important by Respondents R4 and R1 but it is considered the main activity by two other group members. Respondent R4 is more involved in political activities than engaging in the aforementioned Pagan activities (Table 1.1, 12/R1, 12/R4).

By observing the 'n' and 't' values in Table 1.1, the symbolic reality common to all group members can be identified. Moreover, within the group, sub-realities which are different from the common reality are noticeable. These symbolic sub-realities are created during the more intensive communications by individuals within the group.

Group and society: dissemination of Pagan knowledge

Tables 2 and 2.1 below show the activities of Earth group members relevant to their spiritual influences on society as well as their perceptions of societal reactions regarding their ideas about Paganism.

Table 2. Earth group member activities relevant to their spiritual influence on society

	Others	E1	E2	E3	E4	E5	R4	R1	R2	R3
49							t	t	t	t
50							t	**n**	**n**	t
51							t	t	t	t
52							t	t	?	t
53							t	**n**	?	**n**
54							**n**	t	?	t
56							t	t	t	t
57							t	**n**	**n**	t
60							t	t	t	t
61							t	t	?	t

Table 2.1. Societal reactions to the "public relations" by group members

	Others	E1	E2	E3	E4	E5	R4	R1	R2	R3
58	+						**t**	**t**	**t**	**t**
59	+						n	n	n	n

Table 2 and Table 2.1 represent the relations between those who share their knowledge about Paganism and its recipients.

Sharing knowledge (Table 2)

The 't' values in Table 2 indicate group member assertions concerning activities relevant to their spiritual influence on society. The following are examples of assertions found in the group: "My mission is to share knowledge about Paganism with other people and encourage their consciousness-raising" (49) and "We are acting all over the country because we are all Lithuanians; we are all Pagans" (54).

Group members share knowledge about Paganism in different environments outside the group: "I share my propaganda with co-workers" (52) and "I got involved in politics because I wanted to share my knowledge about Paganism with politicians" (50). Value 50 represents disagreements among group members concerning participation in politics. However, Respondents R3 and R4 think that their efforts can help to improve the social standing of Pagan groups in the whole country.

Civilised people and commoners (Table 2.1)

Group members get many different *reactions* from *people* when they tell them they are Pagans and try to share ideas about Paganism. The following are group member descriptions of the environment that identify their views towards recipients (members of the society) who react differently to the ideas of Paganism (Table 2.1): "Civilised people [are those who] don't demonstrate their disapproval of Pagan ideas" (58) and "Commoners [are those who] don't understand us and demonstrate their opposition" (59).[4] As per the views of group members, disagreements arise because of the society's inability to understand the ideas of Paganism.

Earth group and other Pagan communities: agreements and disagreements

Table 3 shows perceptions by the Earth group regarding the attitudes of other Pagan groups' members towards them. Table 3.1 relates to challenges raised by group members to the leaders of other Pagan groups.

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4   Group members, sensing themselves as central, transfer the marginal position to the society-at-large; thereby they seemingly reorganise the usual levels of the societal hierarchy. The data substantiate the transformation of the classical, "high-low" cultural concept (see Fornäs,1995, pp. 96-102).

Table 3. Thunder group member attitudes towards the Earth group

	Others	E1	E2	E3	E4	E5	R4	R1	R2	R3
107				+			**t**	n	n	n
108				+			**t**	n	n	n
110		+		+			**t**	n	n	n
111				+			?	n	n	n
112		+					?	**t**	**t**	n
115		+					n	n	n	n
117				+			?	n	n	n

Table 3.1. Challenges to leaders of the Thunder group

	Others	E1	E2	E3	E4	E5	R4	R1	R2	R3
109							?	**n**	**n**	t

Ignorance (Table 3)

Table 3 represents the state of Earth group members who are influenced by negative attitudes towards them from members of other Pagan groups. The following are examples of negative attitudes emanating from the leading Pagan group:

"E3, the leader of the other group, often disagreed with cosmological ideas; he doesn't understand what we are doing" (107) and "Leaders from the Thunder group cramp Earth activity" (108).

According to the data in Table 3, group members perceive that some of the other Pagan groups "surrendered to money and honour" (111) and "They don't understand that we have found something more; other Pagans can not get higher positions in spiritual growth" (110).

The 't' value ascribed to Respondent R4 shows that this group member evidently does not express such criticism about the other Pagan groups.

Data from participant observations as well as from the interviews demonstrate that Respondent R3 usually directly experiences negative influences from the Thunder Pagan group, and much more so than the other group members do. This is related to the intensiveness of activity by Respondent R3. However, during communication, Respondent R3 shares negative experiences with Respondents R2 and R1. The 'n' values in Table 3 permit an assumption that Respondents R3, R1 and R2 perceive that the Thunder leaders are ignorant about them and react negatively to them.

Against ignorance (Table 3.1)

Table 3.1 shows the reactions of Respondent R3 of the Earth group against ignorance. R3 challenges members of another group to behave in a different way, "I gave way to my emotions for a second and told them, 'why don't we seek acceptance? Why

we humiliated ourselves in the eyes of foreigners'" (109). However, the others group members did not accept this challenge.

In summary, the tensions which arise within and between groups with different values and ideologies depend on the activities and the intensiveness of self-expression by groups members.

The Earth group and society: agreements and disagreements

Tables 4 and 4.1 below represent the perceptions by the Earth group of societal attitudes towards them and the reactions of group members to these attitudes.

Table 4. Societal attitudes towards the Earth group

	Others	E1	E2	E3	E4	E5	R4	R1	R2	R3
63	+						**t**	n	?	n
69	+						?	n	n	n
70	+						?	**t**	**t**	**t**
71	+						n	n	n	n
72	+						n	n	n	n
73	+						?	n	**t**	n
74					+		n	n	n	n
75	+						n	n	n	n
76	+						?	n	n	n
77	+						n	n	n	n
79	+						?	n	?	n
113	+						?	n	**t**	n
114					+		n	n	n	n

Table 4.1. Challenges by Earth group members to society

	Others	E1	E2	E3	E4	E5	R4	R1	R2	**R3**
62							t	t	t	t
66							?	t	t	t
78							?	**n**	t	t

Society doesn't understand us (Tables 4 and 4.1)

The 'n' value in Table 4 shows the negative experiences of group members regarding communications with different members of society. "The majority of people has a low spirituality and doesn't understand us" (63). "Others don't understand us; they haven't knowledge about Paganism" (72). "We were called Satanists by a representative of the Catholic Church" (74, 114). "Society worships money and sex" (75) and "Society treats me wrong" (77).

Positive values, marked 't' in Table 4, show relations of the respondents with their "former classmates, colleagues, teachers" (70), who are distinguished by the respondents from the society-at-large (70/R1, R2, R3).

Value 73 is unique due to its positive description of society. Respondent R2 is the only group member who "experiences positive reactions in behalf of society. Society is becoming virtuous" (73/R2). The respondent engages in cosmology-related activities and doesn't communicate intensively with members from other groups or with "society".

The following quotations represent the efforts by group members to distinguish themselves from the environment. "We have reached a high level of spirituality and have never been slaves to money" (62 in Table 4.1). "I don't talk about that to people who don't understand it" (66) and "I am a fighter" (78).[5]

Why members drop out of the Pagan community

Table 5. Members who dropped out of the Pagan community

	Others	E1	E2	E3	E4	E5	R4	R1	R2	R3
90		+					n	?	n	n
92		+					t	n	n	n
96		+					?	n	n	n
98		+					?	n	n	n
116		+					n	n	n	n

Table 5.1. Self-confidence of group members

	Others	E1	E2	E3	E4	E5	R4	R1	R2	**R3**
93							**n**	?	t	t
95							t	t	t	t

They want to be leaders (Tables 5 and 5.1)

The 'n' value in Table 5 shows the negative reactions of the respondents to those who drop out of the Pagan community. The following quotations from interviews maintain that "quite a few group members left" because they wanted to be leaders. "They want to be leaders; they want to leave an imprint on society" (96) and "Others are not accepted, because there is always someone who wants to lead" (98).

Values 93 and 95 in Table 5.1 indicate that most group members do not tolerate others who want to lead. "There can't be many of us (leaders)" (93).

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5   Ibid.

Relations within the group

Tables 6 and 7 present information concerning communications by members within the group.

Table 6. Agreements and disagreements

	R4	R1	R2	**R3**
32	t	t	t	t
35	**n**	t	t	t
36	?	t	t	**n**
37	t	t	**n**	**n**
41	t	t	t	n
42	t	**n**	?	t
45	t	t	?	**n**
46	?	t	**n**	**n**
47	**n**	t	t	**n**
92	t	t	t	t

Both values ('n' and 't') appear in Table 6 in varying proportions relevant to different circumstances. For example, Respondents R3 and R2 reject the willingness of R4 to be a leader (37/R2; 37/R3). "He wants to be a leader. He isn't a bad guy, but he doesn't understand everything in essence" (37/R2).

Respondent R1 accepts his leadership, but he disagrees with R4 regarding his participation in politics (42/R1).

As respondents related, different levels of knowledge, willingness to lead and willingness to participate in politics are the main reasons of disagreements within the group.

Table 7. Roles within the group

	R4	R1	R2	R3
20	t	t	t	t
21	**n**	t	t	t
22	t	t	t	t
23	**n**	t	t	t
24	t	t	t	t
25	t	t	t	t
26	t	t	t	t
27	t	t	t	t
28	t	?	**n**	**n**
29	t	t	t	t
30	t	t	t	t

The 't' values, which dominate in Table 7, describe approval by group members regarding their roles within the group. What has *become clear* while communicating with the respondents is that the roles within the group help to reach a consensus among group members. As per Respondent R3, "each of us does his or her own work, the one we can do best." The following quotations present explanations by group members regarding their cultural roles:

> "I am like fire, I was born on the land of the ancestors, and my mission is to communicate with people" (R3, 20).
> "According to the old cosmological knowledge, Vaiva [R3] is a leader; she should organise everything. She shouldn't deal with scientific research like me" (R2, 21).
> "My work is to collect data; I look for and review the manifestations of ethno-cultural and ethnographical phenomena. I make a calendar of nature for our Earth group" (R2, 22).
> "Virga [R2] is capable to understand everything better. She works on Chinese and Japanese cultural heritages. She analyses everything" (R3, 23).
> "My husband Toris [R1] is a guard; he is called Vytis [a horseman]" (R3, 25).
> "Andre [R4] has reached the third eye of a scientist" (R3, 26).
> "Andre [R4] organises our gatherings" (R3, 27).
> "I am a guard; I take care to avoid the appearance of conflicts in the group" (R1, 30).

The 'n' values in Table 7 (28/R2; 28/R3) are also found to indicate disagreement, as per the following statement by Respondent R4, "Without a doubt, in Lithuania, I am the leader of this trend of Paganism which is based on the energy of nature."

To summarise, leadership is a significant factor in Pagan group behaviour. Role divisions among group members contribute to a harmonious coexistence with those who tend to appear on the scene of the culture.

The next step: reduction of values

The reduction of empirical values helps to generalise the following relations:
  1) How group behaviour depends on communications by members within the group.
  2) How the external environment influences the state of the group and, consequently, how the behaviours of group members depend on this state.

The reduced list of values of variables regarding *environmental influences on group members* ('n') (Tables 1, 2.1, 3, 4 and 5) is presented below.

Sceptical environmental influences as identified by group members

List of values

1. Pagans from other communities strongly believe in gods and deities (Table 1, Environmental influences relevant to the Pagan worldview).
2. Society that doesn't understand Pagan values disagrees with us (Table 2.1, Societal reactions to the "public relations" by Earth group members).
3. Leaders of the Thunder group cramp Earth group activities; they want to be leaders but they cannot rise any higher (Table 3, Thunder group member attitudes towards the Earth group).
4. The majority of people who have no knowledge about Paganism and have low spirituality reject us (Table 4, Societal attitudes towards the Earth group).
5. Other members wanted to be leaders so consequently they dropped out (Table 5, Members who dropped out of the Pagan community).

Table 8 below is compiled identically to the tables previously discussed in this report.

The 'n' and 't' values were identified by virtue of "summarising/generalising" the 'n' and 't' values for each respondent as assigned in Tables 1, 2.1, 3, 4 and 5. Each case is considered individually when the values for each member of the group are being generalised. For example, the following are the values assigned by Respondent R4, as presented in Table 3: 't', 't', 't', 'n', '?'. The process of generalising the values involves the interpretation by the researcher who must be grounded in field experience.

Table 8. Influences from a sceptical environment as identified by group members

	Others	E1	E2	E3	E4	E5	R4	R1	R2	R3
1			+	+		+	n	n	n	n
2	+						n	n	n	n
3				+			?	n	n	n
4	+				+		**?**	n	n	n
5		+					?	n	n	n

The 'n' values in the table display the negative perceptions by a *sceptical environment* on group members, which include members from other Pagan groups as well as persons from the society-at-large.

Below the reduced list of values of variables regarding *self-expression by group members towards their environment outside the group* ('y') is presented. It is in conjunction with Table 9, which denotes the agreements and disagreements among group members concerning the ideas and the behaviour characteristic to the group.

Self-expression by group members on sceptical environments

List of values

1. We consider ourselves energy; share the value of respect for nature much more than for gods and deities (Table 1.1, Assertions by Pagans).
2. Our mission is to share knowledge about Paganism with other people and encourage their consciousness-raising (Table 2, Earth group member activities relevant to their spiritual influence on society).
3. Group members challenge the leader of the other Pagan group to behave in a different way (Table 3.1, Challenges to leaders of the Thunder group).
4. We have reached a higher level of spirituality and have never been slaves to money. We don't talk about Pagan ideas to people who don't understand them. Sometimes we fight (Table 4.1, Challenges by Earth group members to society).
5. There can't be many of us/leaders (Table 5.1, Self-confidence of group members).

Table 9. Self-expressions by group members on the environment outside the group

	Others	En1	En2	En3	En4	En5	R4	R1	R2	R3
1							t	t	t	t
2							t	t	t	t
3							?	n	n	t
4							t	t	t	t
5							n	t	t	t

How do group members react to sceptical attitudes towards them by other Pagan groups or other members of society? They believe in their individual way of Paganism and *perceive themselves* to be at a higher level of spirituality. They don't talk about Pagan ideas to people who don't understand them. Sometimes they fight. The most active member of the group challenges the leaders of another Pagan group to behave in a different way (3/R3). Although such emotional reactions and challenging behaviour are characteristic of only one member of the group, it is, nonetheless, important to point out this respondent when considering group behaviour, since this respondent is one of the leaders of this group.

Some of the others who have dropped out of the Pagan community are perceived by the respondents as those who wanted to be leaders. The group members react in an unfriendly way to such persons since they think that only those who have reached higher spiritual growth can be a leader.

Disagreements within the group

Below we present the reduced lists of values for the variable, Agreements and disagreements. (Here we put special emphasis on disagreements within the group.)

List of values

1. Some members have a different level of knowledge.
2. Respondent R4 wants to be a leader.
3. Respondent R4 participates in politics.

Table 10. Disagreements within the group

	R4	R1	R2	**R3**
1	**n**	t	t	t
2	t	?	n	n
3	t	**n**	?	t

The 't' and 'n' values in the table represent different attitudes of the respondents towards the meanings which appear during communications among members within the group.

According to the data, Respondent R3 sees that some group members have different levels of knowledge. Values 1/R4-R3 in the table show that Respondent R4 is the only member who disagrees with this opinion. Respondents R3 and R2 are sceptical about the desire of Respondent R4 to be a leader (2/R3, R2). Respondent R1 sees that R4 wants to participate in politics and that R3 follows him because of the possibility to share Pagan values with politicians. However, Respondent R1 is worried about that. He is against politics (3/R1, R4, R3).

Different levels of knowledge, willingness to be a leader and participation in politics are the main disagreements within the group.

Roles within the group

List of values

1. My mission is to communicate with people, to share our knowledge (R3).
2. My work is to collect data about Pagan origins (R2).
3. I am a guard (R1).
4. R4 organises our gatherings (R3).
5. I am a leader of this trend of Paganism in Lithuania (R4).

Table 11. Roles within the group

	R4	R1	R2	R3
1	t	t	t	t
2	**t**	t	t	t
3	t	t	t	t
4	**t**	t	t	t
5	t	?	n	n

The roles of the group members are related to the creation of a life-world of Pagans. Respondent R2 is interested in the symbols which express the meanings of ethnic culture. He develops a system of knowledge about Paganism and shares it within the group with other members. Respondent R3 communicates more intensively with the other Pagan groups as well as politicians and shares this knowledge with them. Respondent R4 (the organiser) also participates in politics, but this respondent's role within the group is to organise calendar holiday gatherings for a wider circle of participants. Respondent R1 (a guard) takes care of the spiritual safety of group members especially of those who tend to share Pagan knowledge with people outside the group. This table clarifies the mutual acceptance of roles by group members within the group, excepting Respondent R4, the member who believes he/she is one of the leaders of the Pagan movement.

Discussion

The ethnographic texts tend to disclose a variety of meanings which are attached to these values. Unfortunately, due to the scope of this report, it is not possible to pursue these concepts comprehensively.

A hypothetical frame of behaviour by group members is evidenced herein, one which tends to disappear when discussing merely the fragments of relations within the group as well as between the group and its environment.

The fragments regarding the state of group members and, consequently, the self-expression by different members of the group highlight the following:

- Willingness to create a Pagan lifestyle as well as to make his/her own role within the group relevant to self-realisation within the group as well as developing knowledge about Paganism
- Willingness to be a leader relevant to self-realisation within (as well as outside) the group and the development and dissemination of knowledge about Paganism
- Willingness to participate in politics relevant to self-realisation outside the group and dissemination of knowledge about Paganism

Those who are active tend to disseminate their knowledge about Paganism to the environment outside the group (communicate with other Pagans, politicians and the like). As a result, they usually experience ignorance, disagreements and rejection. This helps them realise that they behave contrary to the expectations of the environment in which they tend to participate.

How does this experience change the behaviour of the group members? Presumably group members would not change their values due to the moralities coming from the environment (unless they are disappointed themselves by their choice). Consequently group members endeavour to pass on their knowledge to the environment (in the event their ideas on Paganism are vital).

Will the active group members seek realisation by taking on a leadership role? Possibly he/she will seek to be a leader, not only within the group but also within the entire Pagan community as well as in political activities whenever applicable.

The fragments of communications among the members within the group as well as those between group members and the environment outside the group, as described in this report, tend to the following interpretation. The Pagan community tends to divide up into smaller circles of members (subgroups) who seek realisation of their individual values which they attempt to transfer into the wider Pagan community and in their social lives as well.

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The ethnographic materials systematised here, due to the development of meaningful structures of variables and associated values, can be used for different purposes by researchers. A researcher can move towards a more strict reduction of values in an attempt to find the main causal relations for explaining group behaviour. Furthermore a researcher can readily move towards a reorganisation of the structuring of variables and values in the event there is some dissatisfaction with the results of his/her work. Structures can be compared with materials collected by other researcher in other group, assuming both researchers agree with a particular structure of variables. The ethnographic materials systematised in this manner become a reliable source of information for researchers who tend to more systematically describe the behaviour of some particular group in its specific environment.[6]

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6   For other examples of empirical information analysis in the framework of a modified systems approach, see E. Ramanauskaitė, & R. Vaišnys (2009). Lessons from a Lithuanian Hippie Paradise Glimpsed through a Keyhole. In G. McKay, Ch. Williams, M. Goddard, N. Foxlee, & E. Ramanauskaitė (Eds.), *Subcultures and New Religious Movements in Russia and East-Central Europe*. In H. Chambers (Ed.), Cultural Identity Studies, 15. Oxford, Bern, Berlin: Peter Lang.

Conclusions

While most researchers agree that our current understanding of how groups form and develop is very incomplete and that improved understanding of the behaviours of real groups will require both empirical observations and theoretical analysis, there is little agreement on how such a study programme might be implemented. One class in such a programme tends to concentrate on the empirical, providing rich, descriptive details of very specific situations, but the generalisation remains unknown. Another class tends to involve speculative theoretical constructions using concepts too general to be relevant to concrete situations. By their very nature, empirical studies must observe the concrete attributes of specific groups; likewise theoretical studies must be cast in terms of abstract concepts. Scientific development occurs when theories guide what is observed and when the concepts used in the theories are coupled with what is being observed. In this three-part paper, we attempted to indicate both the key steps needed for such a programme and the nature of the difficulties that can be expected while implementing the proposed approach. Among the constructive developments in this direction, although we are forced to illustrate them through incomplete examples, we mention the advantages for ethnographers to devise well-defined and unambiguous characterisations of what is observed, to be explicit in describing not only the systems of interest but also the environments in which the systems occur and to employ theoretical concepts and structures needed for allowing a consistent integration of partial information and the possibilities inherent in the exploration of simplified theoretical models in systematic ways.

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Grupių teorija ir tyrimų praktika

Santrauka

Vytauto Didžiojo universiteto tyrėjai analizuoja empirinių tyrimų ir teorijos sąveikos tobulinimo galimybes. Tradiciškai stebėjimams ir teorijoms keliami skirtingi uždaviniai. Autoriai siūlo metodą, padėsiantį šiuos uždavinius integruoti. Integruota tyrėjų veikla trunka gerokai ilgiau,

nei galima tikėtis, nes stebėjimų ir teorijos sąveikos bei plėtros kryptis svarbu suderinti jau pirmuose bandymų etapuose, kai pritaikomumas vis dar gali būti modifikuotas.

Šią ataskaitą sudaro trys skyriai. Pirmame skyriuje (parengtame J. Rimo Vaišnio) „Dinaminių sistemų prieigos pristatymas" pateikiama dinaminių sistemų teorijos prieiga, t. y. kaip ją supranta fizikos mokslai ir, vis didėjančiu mastu, biologijos mokslai. Tai, kad šis teorinis požiūris prisidėjo prie problemų formulavimo ir sprendimo, aprėpdamas tiek disciplinų, suteikia daug motyvacijos jį taikyti tiriant subkultūras. Vienas pirmųjų teorijos įnašų į mokslo plėtrą yra rekomendacijos apie empirinės informacijos organizavimą, o šioje veikloje vienas pirmųjų žingsnių yra apibūdinti tiriamų objektų panašumus ir skirtumus. Pirmojo skyriaus pabaigoje pateikta iliustracija, kurioje naudojami faktiniai tyrimo duomenys, gauti projekto įgyvendinimo metu (p. 29). Kai tik visa informacija, gauta atliekant projekto tyrimus, bus tinkamai sutvarkyta, galima tikėtis sparčios pažangos, taikant šią metodiką.

Antrasis skyrius (parengtas Andriaus Buivydo) „Mažų grupių modeliavimo galimybių pristatymas" skirtas matematinio modeliavimo galimybėms aptarti. Vienas įdomesnių rezultatų yra subjekto elgesys per tam tikrą laiką arba reakcija į kitų subjektų veiksmus. Modeliavimo veikla praplečia tyrėjo akiratį, sudarydama sąlygas savarankiškam tyrimui. Tai yra naudinga paskata tolimesniam empiriniam darbui, pateikiant konkrečių įrodymų apie teorijos spragas. Kadangi pristatymas yra didaktinio pobūdžio, pateikiamas tik labai paprastas pavyzdys – individualusis modeliavimas. Vieninteliai pastebėti šio metodo sunkumai yra mokslininko vaizduotė ir aktualios empirinės informacijos sukaupimas.

Trečiame skyriuje (parengtame Egidijos Ramanauskaitės) „Susiejimo su empirika galimybių pristatymas" aprašomas procesas, kai etnografiniai stebėjimų duomenys transformuojami į informaciją ir ryšius, sudarančius tolesnės teorinės analizės pagrindą, taip pat suformuluojami uždaviniai papildomiems tyrinėjimams. Nereikėtų stebėtis, kad mažai grupei (kuri pati savaime yra kompleksinis subjektas) apibūdinti reikia išsamios ir ilgai trunkančios analizės. Šiame skyriuje pateikiama tik dalelė darbo, atlikto su nedidele pagonių grupe, tirta SAL projekto metu, pristatymas grindžiamas tik keletu labai detaliai atrinktų požymių. Tokiu išsamiu pristatymu norime parodyti, kaip galima parengti prasmingą, naudingą ir vienareikšmį realių reiškinių apibūdinimą.

Raktažodžiai: dinaminės sistemos, modeliavimas mažose tyrimo grupėse, struktūrinė etnografija.