

The Role of Subtle Signals Linked to Religious Rituals in the Evaluation of Newcomers by a Village Community

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The purpose of the paper is to explore the role of religious rituals in assessing the behaviour of new people who come to live in their locality. It presents ethnographic data collected in a village in western Slovakia to demonstrate that participation in rituals plays an important role in the old settlers' descriptions of newcomers. To interpret their statements, we refer to the signalling theory which was applied in the cognitive and evolutionary approach to the study of socio-cultural phenomena. Empirical work in this field has shown that participation in low-frequency and high-cost religious rituals is perceived as an honest signal of group commitment. We argue that if such rituals are absent in a particular locality, then trustworthiness, commitment to the group, and compliance with group norms are communicated by other types of signal, in particular high-frequency low-cost subtle signals, such as participating in various activities related to religious life, in particular regular religious rituals. This paper is a preliminary study which aims to draw attention to subtle religious signals in particular socio-cultural settings.

Key words: signalling theory, religious rituals, low-cost high-frequency signals, subtle signals, Slovakia

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Introduction

The aim of this paper is to explore the role of religious rituals in people's assessment of behaviour of new persons who come to live in their locality. We will present ethnographic data collected in a village in western Slovakia to demonstrate that participation in rituals is an important factor in this process. In interpreting the collected material, we will refer to the signalling theory which was developed in evolutionary biology and applied in the cognitive and evolutionary approach to the study of socio-cultural phenomena, including religion. This theory is aimed to explain communication between individuals by means of exploring the signals they provide; the central question the theory poses is when individuals with conflicting interests are expected to provide honest signals rather than cheating (Barker et al., 2019; Bulbulia, Sosis, 2011; Sosis, 2003; Sosis, Alcorta, 2003).

The signalling theory pays considerable attention to the so-called hard-to-fake signals, which are defined as costly, because they tend to impair the biological fitness of the organism produced by them. Regarding the religious sphere, the hard-to-fake signals are characteristic of extreme rituals involving activities such as extensive physical exertion, piercing some parts of the body with sharp objects, walking on burning coals, prolonged fasting, etc. Due to their cost, these practices cannot be performed frequently. As numerous experimental studies based on ethnographic research have shown, participation in the low-frequency high-cost rituals seems to be taken as an indication of trustworthiness of the individuals involved and a signal of their willingness to invest various types of resources in the group (e.g., Lang, 2014: 177; Irons, 2001; Konvalinka et al., 2011; Xygalatas 2012; Xygalatas et al., 2013; Xygalatas et al., 2017; Xygalatas et al., 2021; Maño, 2019; for further discussion of the signalling theory and handicap principle see Penn, Számadó, 2020).

Extreme rituals present a certain pole of religious practices. As Harvey Whitehouse (2004: 63) has noticed, it has long been recognized that religion encompasses two very different sets of dynamics: some rituals are very intense emotionally and are rarely performed (imagistic religiosity); other forms of religious activity, on the other hand, are highly repetitive or 'routinized', conducted in a relatively calm and sober atmosphere and are accompanied by the transmission of doctrine (the so-called doctrinal religiosity). The latter are characteristic of the daily life of believers and in this sense constitute the main bulk of religious practices. In Slovakia, where Christianity is a dominant religion, believers in most villages attend rituals belonged to the doctrinal category, although at some places and on some occasions we would perhaps find such religious activities as hard fasting or other forms of physical exertion. But the absence of rituals with costly signals in a given religious community does not mean that people do not take religious rituals into account when they judge behaviour of others.

It has been argued that research focusing on costly signals might have led to other types of signals being overlooked. Only recently, authors began to explicitly and theoretically recognize the difference between multiple modalities of costly signals

that includes the dichotomy of high-frequency and low-cost versus high-cost and low-frequency. Although extreme and costly rituals (signals) have so far received more attention, in the past decades, the focus has also been shifting toward less costly rituals. For example, Sosis and Ruffle (2003), as well as Soler (2012) studied the low-cost rituals (subtle signals) from the perspective of signallers. On the other hand, Hall, Cohen, Meyer, Varley and Brewer (2015) and Purzycki and Arakchaa (2013) looked at the low-cost signals (subtle signals) from the perspective of the signal receivers. The so-called subtle signals, which are not costly or physically straining but rather discreet, are often prevalent in social interactions and can be potentially important communicative acts.

If religious rituals do not include costly signals and are performed frequently, participation in them can also serve to support reliable communication and indicate group commitment and adherence to the group norms. In several recent studies that explore the different contexts and costs of signalling strategies, the attention shifted from signallers to signal receivers and their assessment of subtle signals (Barker et al., 2019; Bliege Bird, Ready, Power, 2018; Bliege Bird, Power, 2015; Power, 2017a, 2017b, 2018; Power, Ready, 2019; Számadó et al., 2021; see also Raihani, Power, 2021). In this paper, we follow this approach and investigate how people living in a village evaluate the subtle signals of newcomers.

From a methodological point of view, the study of the subtle signals requires long-term research that enables observation of the cumulative effect of particular types of behaviour. Our paper is based on the results of the two-years fieldwork. It took place as part of Michal Uhrin's doctoral study under the supervision of Tatiana Bužeková. However, this research was not focused on the relationship between old settlers and newcomers – it aimed to identify forms of cooperation in the village and their relation to people's membership in different religious communities.¹ The topic of newcomers as an important issue emerged only after analysis of the collected data. Due to the original research focus, we cannot claim to present sufficient data to fully explore the topic of the statements and behaviour in relation to newcomers. Thus, this article is intended as a preliminary investigation which aims to draw attention to the importance of the subtle religious signals in particular socio-cultural settings and thus serves as a starting point for further research in this direction.

In the first part of the article, we will describe the research site, the sample of respondents, and the research methods. In the second part, we will examine how the behaviour of newcomers related to religious life is explicitly evaluated, as demonstrated by the statements of people who were born and lived for a long period in a chosen locality. Finally, we will present some questions that emerged from our analysis but cannot be answered by our data or other available research, indicating promising ways for future research.

1 The research was aimed to explore religious signalling in real-life settings and demonstrated how it promotes cooperation in mutual interaction with reputation, prestige, and compliance with norms (Uhrin, 2020). The writing of the presented paper was done with equal collaboration of both authors.

Research site and research methods

The presented ethnographic research was carried out from July 2017 to December 2019 in the village of Nová Bošáca located in western Slovakia in the White Carpathians, near the border with the Czech Republic. The permanent population of the village is approximately 1100, with 800 people of the Roman Catholic confession and 250 of the Lutheran confession.² The predominance of Catholic inhabitants has lasted since the second half of the seventeenth century. There is a Catholic church in the village, which was built in 1971, but no Lutheran church (Lutherans attend church services in the neighbouring village Zemianske Podhradie, approximately five kilometres away from Nová Bošáca).

In the past, Nová Bošáca (New Bošáca) was not a village, but *kopanice* (dispersed settlements, from *kopať* – to dig)³ belonging to the nearby village of Bošáca. Extensive dispersed settlements have been documented since the middle of the seventeenth century, when the area began to be rapidly populated by people from surrounding villages and towns. The main reason for this process was a lack of agricultural land. Since the seventeenth century they have become permanent – meaning the inhabitants live in the area throughout the whole year. The village of Nová Bošáca was officially established in 1950 by separating the various dispersed settlements from the municipality of Bošáca. Several of dispersed settlements still form parts of Nová Bošáca and their names are common in the colloquial speech of its inhabitants. Since the 1950s, many people have gradually moved from the distant settlements to the central part of the village called Predbošáčka or to the surrounding towns and villages. This was mainly due to difficult living conditions in the dispersed settlements, as well as problematic access to work and a lack of job opportunities. However, today some people still live in the remote settlements, approximately four to ten kilometres from the centre of the village (Kravarčík, *Ed.*, 2000; Kravarčík, 2010; Ochodnický, Dzurák, 1994; Kukuča, 2016).

Since the second half of the seventeenth century, Nová Bošáca and the dispersed settlements have been characterised by an agricultural mode of subsistence. Agriculture is part of the livelihood of the population even today. Some of the inhabitants are employed in the primary school and kindergarten, the municipal office or in the social services home. Currently, a significant number of people of working age travel for work to Trenčín (located at the distance of 34 km from Nová

2 By Lutherans we understand members of the Evangelical Church of the Augsburg Confession in Slovakia (<https://www.oikoumene.org/member-churches/evangelical-church-of-the-augsburg-confession-in-slovakia>). The proportion of Catholics and Lutherans has only slightly changed since the 1990s: in 1991 census, 903 inhabitants declared themselves Catholics and 304 inhabitants declared themselves Lutherans. In 2001 census, there were 873 Catholics and 290 Lutherans, and in 2011 census, 800 Catholics and 243 Lutherans.

3 When first mentioning emic terms, we will present their Slovak transcription in italic and English translation in the following brackets. After the first mention, we will use English translation throughout the text.

Bošáca), or Nové Mesto nad Váhom (located at the distance of 18 km from Nová Bošáca). Both cities are home for food processing, engineering, automotive, and heavy industry companies. According to the municipal authorities, the largest number of residents travel to work to Nové Mesto nad Váhom. As there is no secondary school in the municipality, the inhabitants of the municipality mostly attend secondary schools in the two towns mentioned.

Due to inhabitants' migration from dispersed settlements at the periphery to the centre of the village from the 1950s, there remain many uninhabited houses in the vicinity of the village. In the last thirty years, empty houses provided not only the opportunity for people in neighbouring towns to buy them for the purpose of living, but also the opportunity to modify or reconstruct the original houses and build cottages and chalets for recreational purposes.⁴ *Starousadlíci* (*old settlers*) sometimes refer to the new residents as 'unknown and potential intruders'. Newcomers are further categorised in accordance with the relative permanence of their residence: there is a distinction between *novousadlíci* (*new settlers*) who live in the village permanently and *chatári* (*cottagers*) who come just to spend some limited time in the area.

Several research stays were conducted in the village, ranging from three days to two months. The research was focused on people who were born in the village and lived there for a long time. Thus, ethnographic interviews were conducted with 55 *old settlers* – 38 Catholics (25 women and 13 men) and 17 Lutherans (9 women and 7 men). The age range of the respondents was between 16 and 85 years. All respondents resided in the research area during the duration of the fieldwork. The research sample mainly represented people of working age (15 to 64 years of age). At the time of the research, this was approximately two-thirds of the respondents. The rest of the respondents were of retirement age, that is, 60 years and older.

The interviews were accompanied by participant observation of the regular services in the Catholic church, the social interactions of the village residents and daily activities, as well as numerous public events. These included the International Children's Day celebrations; attendance at the ceremonies in honour of Saint Cyril and Saint Methodius; the patrons of the Roman Catholic Church in the village; a meeting of accordianists of the Bošácka Valley; performances of folklore ensembles as well as performances of the amateur theatre; Catholic mass in honour of the patrons of the Church; the annual official opening of the lookout tower on the nearby Hill of Lopeník that was accompanied by a mass held on its peak; the Plum Festival which was organized by the Association of Pensioners of the village with the help of volunteers; and the traditional Burial of the Bass.⁵

4 For example, on 1 June 2000, in addition to 429 residential houses, there were 150 houses (cottages) in the municipality used for recreational purposes and 22 buildings – municipal facilities: church, community centre, school buildings, shops, etc. (Kravarčík, *Ed.*, 2000: 82; Kravarčík, 2010: 4).

5 The Burial of the Bass is a custom, during which a bass (folk music instrument) is ceremonially buried. The burial is a folk play parodying an actual funeral; this custom marks the beginning of the Lent period and is still common in Slovakia (Luther, 1995: 58).

The ethnographic data collected were analysed using content analysis. The categories of analysis were determined based on the theoretical concepts presented above. The following content domains were established: cooperation; prosociality; reputation; norms; public goods; supernatural punishment and supernatural reward; ritual; costly signals; subtle signals. They were operationalized and filled in with relevant data from the ethnographic interviews and participant observations.

Our analysis revealed that *old settlers* often commented on several activities which can be denoted as related to newcomers' signalling. Their comments were inevitably linked to religion, because in Nová Bošáca almost all of *old settlers* declare themselves to be Christians, most people regularly attend church services, and all significant events are marked by religious practices. *Old settlers'* attitudes varied; but in many cases, the question of community membership was addressed – who amongst the newcomers they consider full-fledged members of the village community and who were still viewed as strangers.⁶ In this paper, we will focus on these declarative statements, although to properly interpret them we would ideally want more observations of the *old settlers'* behaviour towards newcomers and vice versa. However, as we stated above, due to the original research focus this is a topic about which we lack the relevant data to draw firm conclusions about people's behaviour; nor we can make conclusions about newcomers' declared attitudes, because these questions and population were not included in our original research sample. However, the available data indicate that in the absence of extreme high-cost and low-frequency rituals, there are other religious activities that *old settlers* consider as subtle signals of the trustworthiness of individual newcomers and their willingness to invest resources in the group.

Subtle signals of *new settlers* and *cottagers*

Analysis of the ethnographic interviews conducted with *old settlers* in Nová Bošáca reveals that newcomers' behaviours was repeatedly identified an important matter for them. In the absence of information on the kinship of newcomers, it is difficult to place these strangers within the overall structure of social relationships and alliances in the village, and thus to ascribe them a specific reputation.⁷ As *old settler* Boris (1954)⁸ said,

There were also a lot of cottagers and strangers in general in the church today. For example, they even sat on my bench. I don't know who they were, four strangers and me.

6 Regarding differences between Catholics' and Lutherans' statements, we will explicitly draw attention only to those which we could detect in the data; if there were no detected differences, the presented results apply to both religious groups.

7 As numerous studies demonstrated, people use to transmit reputation from one close relative (e.g., father) to another close relative (e.g. son) (see, for example, Henrich, Henrich, 2007; McNamara, Henrich, 2016).

8 The names of the respondents are fictional. When we first mention a respondent, next to their name in brackets we give the year of their birth.

The only possible criterion of classification of unknown people is their residence, as illustrated by Jana's (1973) statement:

In Šance [one of the dispersed settlements – the authors' note], one family has also just bought a house and come to live here with their children. I don't know if they come from the eastern part of Slovakia or from somewhere else. Besides, there are also cottagers, not only those who come here to live.

As we can see, Jana makes a distinction between residents of the village and *cottagers*. *Old settlers* call them *new settlers* – this category includes those residents who were not born in the locality or its vicinity but came to live there. Residents who previously lived in the village, then left, and later returned, are not considered to be new settlers. For example, Nora (1984) who lived in Trnava together with her husband and two children after graduating from college was not categorised as a *new settler*. Her husband was born and lived in Trnava, but he was also not considered to be a new settler, as he was connected to the original resident by affinal kinship. Similarly, Šimon (1982) from Nové Mesto nad Váhom and his wife Lívia (1984) from Nová Bošáca have been living in Nová Bošáca from their marriage and were not denoted as *new settlers*.

During research in 2019 the chronicler of the village⁹ claimed that approximately 90 of the reported 1141 inhabitants of the village were new settlers. Other respondents provided numbers between 60 and 100. Currently, the number of new settlers is increasing. A 'typical' new settler family consists of a man and a woman in their twenties to fifties with their offspring. They often come from larger cities, such as Bratislava, Trnava, or Trenčín in western Slovakia as well as from cities in other parts of Slovakia, for example, Spišská Nová Ves or Vranov nad Topľou situated in the east, but also from the Czech Republic. They buy either old and uninhabited houses, which they reconstruct, or land on which they build new houses. According to the municipal office workers, they prefer to buy 'smaller' buildings, which are already built and available for sale, rather than large multi-generational houses.

The approximate number of cottagers is estimated by the municipal staff at two hundred. This group is heterogeneous in terms of gender, age, profession, and education. They are mostly inhabitants of cities such as Bratislava, Trnava, or Trenčín; they buy unoccupied houses and rebuild them into cottage-type dwellings or they buy land where they build summerhouses. Unlike new settlers, they do not live in the village permanently: they stay in the cottages during weekends, summer, and holidays.

As cottagers' and new settlers' reputation and trustworthiness cannot be easily identified at the start of their appearance in the village, people gradually build their attitudes on the base of direct observation or by obtaining information from verified

9 In villages in Slovakia, local municipalities usually appoint a chronicler and supervise a chronicle aimed to record important events that took place in the village. The tradition of chronicles has a long history in Slovakia: its beginnings could be dated back to the medieval times (Pavlíková, 1999).

and relevant sources, such as close relatives, cooperation partners, municipal office workers, or prestigious individuals (e.g. religious experts). Table 1 indicates categories of newcomers' behaviour, on which the *old settlers* commented; understood in terms of the signalling theory, they could be called signals. The table also shows their costliness, frequency, and reception. The table was built based on the analysis of ethnographic interviews and participant observations.

Table 1

Signal	Cost	Frequency	Reception
1. Organisation of public events	context-dependent	low	positive
2. Attendance of public events	low	low	positive
3. Attendance of church services	low	high	positive
4. Compliance with religious prescriptions of ritualized behaviour	low	high	positive
5. Participation in the organization of rituals	low	high	positive
6. Maintenance of the church building and its surroundings	low	high	positive
7. Financial contributions	high	low	context-dependent

As we can see, four from seven listed kinds of the newcomers' signals are linked to religious rituals, taking into consideration that practically all public events include them. Organization of public events emerged as a specific topic in this context. Examined through the signalling theory, such activities can be viewed as signals of low-frequency, and the cost is context-dependent, as it could involve various investments. For instance, if organization of a public event requires only a small investment of time or money, it is rather subtle signal. Another subtle signal is attendance of church services. This is not costly, but its frequency is decisive to be perceived as honest: attending services once a year will not convince other members of a religious community of a person's commitment, but weekly attendance will. The same applies to participation in the organization of rituals (first communion, confirmations). The sixth strategy – maintenance of the church building and its surroundings, such as cleaning, washing, etc. – is not a ritual as such, but it is linked to ritual performance. The seventh signal – financial contributions – can be applied in the religious as well as the non-religious sphere (we will consider it later). Below we will demonstrate that religious subtle signals, in particular participation in rituals, are positively assessed by the *old settlers*; their absence, on the contrary, is a signal that is assessed negatively.

Notably, people's negative assessment of *new settlers*' and *cottagers*' behaviour was mostly made in reference to general categories, without mentioning particular names.

For example, *new settlers* and *cottagers* were said to be not as religious as *old settlers*. The same applied to public events:

They are from Bratislava, Trnava, Trenčín. They are also permanently settled here. Even from Vranov nad Topľou, but most of them from Bratislava. They first came as cottagers, and then they also got permanent residence and go to work from there. Two-thirds of them are already permanent residents. I know some of them, but some live here and we don't know them. One family of new settlers lives a short distance from us, and we don't even know them. These are the ones who don't even go to public events. They live for themselves, you know, and two-thirds of them are like that. I don't even know some of them (Miroslav, 1961).

However, later during the interview Miroslav named particular *new settler* families which attended and participated in the organization of public events, and positively evaluated their activities. Such a shift from general categories of *new settlers* and *cottagers* to particular names was also evident in other interviews. This indicates that religious signalling has had an effect, as respondents moved from referring to a general category of unknown strangers without names who do not behave as old settlers to referring to newcomers as particular people who behave as members of the community, as 'us'. For example, *old settler* Sebastián (1963) describes *new settlers* without names, but singles out Dagmar, who is a *new settler*, but is involved in organising public events:

There are many people living here that we don't know. The newcomers especially. A lot of new people here and you don't know their names. They move here permanently from all corners of Slovakia. Even Dagmar who stopped by today.

Above we mentioned that the municipal workers were considered as a reliable or trusted source of information regarding newcomers. The reason being that they have access to the official documents and personal information. It should also be noted that due to the nature of their work there were differences between their statements and statements of other respondents. In their assessment of newcomers' behaviour, municipal workers paid attention also to information related to the municipality – particular degree of newcomers' participation in organisation of public events, or their tax payments for temporary residence and garbage collection. Notably, they claimed that those newcomers participating in organisation of public events and attending them, also regularly attended weekly church services and partook in religious life of the village community. The statement of *old settler* Martina (1965), a municipal office worker, is one such example:

Ethnographer: *How do new settlers get involved in public events in the village?*

Martina: *Some get involved, some don't. Some right away, some later. It depends on the nature of the persons. Some are immediately so brave that they come among*

them (among old settlers – the authors' note). Some get quickly involved. Some go to church. They try to do good for the village community. For example, lady P. They have come in December from eastern Slovakia. They also keep horses. Then Mr. A. and his wife also live here, they have a child too. They are also new settlers and have been living here for 4–5 years. Then there is the family K. Another lady moved here from Piešťany. We have such new settlers here, one to four families who are very active. Five families that are very active and moved to live here. They also organise all kinds of environmental actions as well. Garbage collection around the village. The family K. is active. They came from Orava, and they have three children. Mrs. K. works with little kids. Then an amateur theatre group started to perform here. Sára is also new settler and has three children. She is also a part of the theatre group.

It is also important that the permanent residence plays an important role in newcomers' involvement in public life: cottagers, in contrast with new settlers, are said to rarely engage in religious rituals, and this is perceived as a signal of lack of interest in group membership. Thus, cottagers are often described as 'strangers and intruders'. For example, *old settler* Martina (1965) states:

Around ninety people (new settlers – authors' note) moved here and live here permanently. We see those as our citizens. But those cottagers are foreigners, most of the time we have nothing to do with them.

Respondents who did not work in the municipal office assessed new settlers' behaviour in relation to what they have directly observed or on the basis of information provided by a trusted source. They declared a positive attitude towards new settlers who actively participated in life of the village, which for them was manifested by organization and attendance of public events as well as church services and activities. However, they also addressed those newcomers who did not participate, and they directly linked this behaviour to the question of membership. For example, *old settler* Anna's (1958) neighbours were new settlers; she declared a positive relationship with this family, but even after twenty years of their living in the village she did not consider them to be part of the 'original inhabitants of the village' and did not declare cooperation with them. She did not declare cooperation in everyday activities, such as borrowing food, helping with manual work, and other long-term and repeated exchanges of small services. The reason she gave was that the *new settler* family was not involved in the organization of public events and was not participating in church services. On the other hand, Anna considered *new settlers* who engage in these activities as fully-fledged members of the community.

In most cases, *old settlers* displayed indifferent attitudes towards the cottagers. But they often negatively commented on the reluctance of some cottagers to participate in public events as well as on the lack of religious faith among them. They linked the latter to the noncompliance with religious norms, which was seen as a manifestation of disrespect. One of those norms was refraining from heavy or physical labour on

Sundays. This was mentioned by both Catholics and Lutherans, even though the latter did not emphasize it to the same degree as Catholics. For example, *old settlers* Simon (1982) and Lívia (1984) commented on it as follows:

Ethnographer: *How do cottagers get involved in the life of the village?*

Simon: *When there is a public event, some come.*

Livia: *Some come regularly, others not at all. They come here to relax... On Friday they come, on Sunday they leave. When there is a social event and they feel like it, they go to see that event, but mostly they are at their cottages.*

Simon: *For example, heavy manual labour should not be performed here on Sundays.*

Livia: *When those cottagers started coming, they used to cut the grass on Sundays. Then it was announced on the radio that on Sundays it should be quiet.*

Maintenance of the church building and its surroundings is another signal which we identified as significant. For example, *old settlers* Michal (1981) and his wife Michaela (1981) talked about people's willingness to clean the church building on certain occasion with respect and appreciation. Although they did not explicitly mention *new settlers* or *cottagers*, we can see that they evaluate this type of behaviour (signal) positively. Based on these observations, we can infer potential effectiveness of this signal if it were to be performed by *new settlers* or *cottagers*:

Michaela: *When the heating was being installed in the church, my mother-in-law, as the churchwarden, was contemplating: 'Who is going to clean it up?' There was a mess, dust everywhere. The carpets had to be dusted, everything had to be cleaned up.*

Michal: *We were installing solar panels there.*

Michaela: *I was thinking, we'll go there, two or three of us, from our family, and clean it up. Then someone came up with an idea to announce on the public local radio system, that help will be needed to clean the church. Forty women came. Within an hour it was cleaned up. Everything was completely cleaned up.*

Michal: *Within an hour it was cleaned up.*

Michaela: *It was not planned.*

Michal: *Me and the guys installed it on Saturday.*

Michaela: *Nobody organized that.*

Michal: *We didn't count on anybody coming. We were expecting five or six people. There were forty people within an hour.*

Michaela: *They did it on a Saturday before Easter. That was the first time they heated the place. In the morning they installed the heating and in the afternoon it had to be cleaned up. At eleven o'clock they announced it and at one o'clock there were forty people standing there.*

Michal: *It was said that at one o'clock the church would be cleaned. Whoever is interested, come.*

Michaela: *Within two hours people were organized. Even those who didn't hear the message from the public local radio system or know that the heating system was installed.*

Michal: *You know, on Saturday, everybody has work to do at home (they heard that the church had to be cleaned – the authors' note). They throw it away and go.*

Subtle signals are not limited to rituals or the religious domain. Actions such as lending food or items of everyday use to neighbours are equally important in gaining trust and building reputation. However, as the current research did not focus on newcomers' behaviour, we cannot describe these aspects in detail. On the base of available data, we can only say that old settlers explicitly reflect on subtle religious signals and assess them positively when they are displayed repeatedly, over long periods of time. Participation in rituals is especially significant in this sense, which corresponds to broader results in the study of religious rituals: as it was noted, the information that is shared through participation in rituals can be metaphorically expressed as: 'If I participate in this activity with you, you can also trust me when I participate in other activities with you' (Jerotijević, Maño, 2014: 156). However, this statement does not pertain solely to rituals, whether low-cost and high-frequency or high-cost and low-frequency, but to general mechanisms of reputation or reciprocity. It is also notable that a permanent residence plays an important role: cottagers, in comparison with new settlers, are said to engage in religious activities very rarely, and they are more often described as 'strangers and intruders'.

Questions for further research

It has been argued that trust and cooperative behaviour between individuals and groups is difficult to build and then maintain on simple, non-costly, and easy to fake signals (Jerotijević, Maño, 2014). Costly religious signals indicate trustworthiness of individuals and their willingness to invest various types of resources in the group and therefore they help in attracting new cooperation partners. However, they do not belong to frequent religious activities and are not part of religious rituals in all localities. The question is: if they are absent, what mechanisms facilitate acceptance of new members and signal their group commitment? We believe that subtle signals, both in religious and nonreligious contexts, may be conducive to gaining group membership and can be used as one of many means of maintaining trust.

There are several questions that emerged during our analysis that should be answered in future investigations of the role of subtle signals in accepting new members to a community. It is also important that acceptance should be measured by an analysis of both declarative statements and the behaviour of the *old inhabitants* toward newcomers. At the same time, it is important to observe also behaviour and expressed attitudes of newcomers. So far, we have denoted certain types of activities as signalling in the context of *old settlers'* statements; but to classify these types of

behaviour as real signals we must know about newcomers' intentions regarding their desire to join the village community and about their conscious willingness to invest in its resources.

In our observations of the acceptance of newcomers, it is important to make analytical distinctions between categories of signals, as illustrated in Table 2. First of all, we differentiate religious and non-religious activities. Both categories are further divided into ritualized behaviour and non-ritualized behaviour. In all subcategories, we should pay attention to the definition of costliness, as it is central for the definition of costly as well as subtle signals. If costly religious signals are defined mainly in terms of tending to impair the biological fitness of the individual organism during ritual performances, in the non-ritual sphere costliness can be measured by other means, for instance, by amount of financial investment or degree of investment of time and physical activity. In other words, before we make comparisons between categories of signals, we should clarify what we will consider to be the cost in each category.

Table 2

	Religious activities		Non-religious activities	
	Rituals	Other	Ritualized behaviour	Other
High cost / low frequency				
Low cost / high frequency				
Low cost / low frequency				

Another important task will be to place a given signal into the relevant context considering the other types of signals. Financial contributions are a good example of a religious as well as a non-religious signal that is heavily context dependent. Even if the amount of money is large, its reception is not unambiguous. One-off financial contributions may not be a sufficient signal of commitment to a group: as Bliege Bird, Ready and Power argue, these types of signals can be viewed with scepticism and even interpreted as selfish attempts to build reputation rather than as an act of commitment to the group, their members, and norms. However, this does not mean that such investment would not be accepted and utilized by the community. A person who made such a signal for it to be effective would need to accompany it with other signals of higher frequency (Bliege Bird, Ready, Power, 2018: 453).

Thus, making the relevant analytical distinction between categories of signals does not mean that we must consider them independently. However, in the absence of high-cost low-frequency religious signals attempting to make distinctions should allow us to address the following questions:

- What is the difference/connection between a signal receivers' assessment of **religious subtle signals** and **non-religious subtle signals**?
- What is the difference/connection between a signal receivers' assessment of **participation in rituals** and **non-ritualized signals of commitment**?

Based on previous theoretical and empirical work and ethnographic research, we suggest that subtle signals can be as effective as costly signals in building trust and gaining membership to a group. At the same time, there is a question of the relevant weight of religious and non-religious signals in this process: on what conditions are religious activities evaluated by signal receivers as more important than non-religious ones? Another research problem is linked to the evaluation of rituals: on what conditions do people pay more attention to subtle signals that are part of rituals, and how do they evaluate these signals in the context of other signals? We believe that these questions can be answered through long-term ethnographic research, preferably combined with rigorous quantitative methods.

From a theoretical perspective, it would also be interesting to focus on the integration of signalling theory and credibility enhancing displays (CREDs). Joseph Henrich (2009) uses the concept of CREDs instead of ‘costly signals’. He argues that signals are perceived as honest and trustworthy when verbal expressions are backed up by affirmative actions, metaphorically speaking when the talk is supported by the walk. CREDs can be characterized as practices and displays (factual and verbal) that are consistent with the attitudes and opinions expressed commonly in a given group. CREDs are also largely consistent with the declared attitudes and beliefs of the one who performs them. Henrich argues that there is little likelihood of performing CREDs if the person would hold a different attitude than that expressed symbolically (e.g., by language) (Henrich, 2009: 245–247; Jerotijević, Maño, 2014: 157). Henrich does not claim that CREDs must always be costly for the one who performs them, but under certain conditions, costly signals can constitute effective CREDs (Henrich, 2009: 252; Lanman, Buhrmester, 2016: 2–3). Chvaja and Řezníček argue for the integration of CSTR (costly signalling theory of ritual) and CREDs (credibility enhancing displays) into one framework of religious commitment displays (Chvaja, Řezníček, 2019). In the context of the theory of subtle signals, we see such integration as a potentially fruitful approach for future research.

Conclusion

As we discussed above, previous research in the field of the cognitive and evolutionary study of religion demonstrated that participation in religious rituals with low-frequency and high-cost is perceived as an honest signal of group commitment. But if such rituals are absent in a particular locality, then trustworthiness, commitment to the group, and compliance with group norms must be communicated through other types of signals. We argue that in Nová Bošáca participating in activities related to religious life can be categorized as subtle signals. However, signalling is not just about the signals as such: the receivers of the signals are an intrinsic part of the signalling process. They judge the credibility, honesty, and sincerity of the signals. Furthermore, the assessment process is complex, and individual signals, regardless of their cost and frequency, are evaluated repeatedly. They are considered in the context of an individual’s reputation

and overall behaviour toward group members. Therefore, to explore the effectiveness of subtle signals in their complexity, we need to base our conclusions on long-term ethnographic research.

Despite the preliminary nature of our study, we hope this paper could draw attention to the potential for religious rituals that are high-frequency and low-cost in the process of trust building and maintaining cooperation and group cohesiveness. We agree with other authors emphasizing that systematic attention should be paid to this type of signals, and not only in ethnographic settings in which extreme rituals are absent (Barker et al., 2019; Bliege Bird, Power, 2015; Bliege Bird, Ready, Power, 2018; Power, 2017a, 2017b, 2018).

In the last two decades, problematic theoretical and methodological moments of research in W.E.I.R.D. (*Western, Educated, Industrialised, Rich, and Democratic*) societies have been pointed out (Henrich, Heine, Norenzayan, 2010). Newson et al. (2020) offered a solution in the form of a W.I.L.D. (*Worldwide In Situ, Local, and Diverse*) approach to research (Newson et al., 2020). This approach has also been used and has proven to be significant in the study of signaling and rituals in recent years (e.g. Konvalinka et al., 2011; Lang et al., 2019; Xygalatas 2012; Xygalatas et al., 2013). However, we think it may be time to be even a little bit W.I.L.D.E.R. (*Worldwide In Situ, Local, Diverse, and Ethnographic, Repeated*). As we have tried to show in this preliminary study, ethnographic research can be a useful method in the study of religion and signaling from an evolutionary and cognitive perspective. There are multiple layers of explanation for human religious behaviour, and qualitative ethnographic research helps shed light on many of these layers. In conclusion, we believe that repeated long-term ethnographic research is an essential part of the cognitive and evolutionary science of religion.

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REFERENCES

- Barker, J. L., Power, E.A., Heap, S., Puurtinen, M., Sosis, R. (2019). Content, cost, and context: a framework for understanding human signaling systems. *Evolutionary Anthropology*, 28(2), 86–99. <https://doi.org/10.1002/evan.21768>
- Bliege Bird, R., Ready, E., Power E. A. (2018). The social significance of subtle signals. *Nature Human Behaviour*, 2(7), 452–457. <https://doi.org/10.1038/s41562-018-0298-3>
- Bliege Bird, R., Power, E. A. (2015). Prosocial signaling and cooperation among Martu hunters. *Evolution and Human Behavior*, 36(5), 389–397. <https://doi.org/10.1016/j.evolhumbehav.2015.02.003>

- Bulbulia, J., Sosis, R. (2011). Signalling theory and the evolution of religious cooperation. *Religion*, 41(3), 363–388. <https://doi.org/10.1080/0048721X.2011.604508>
- Hall, D. L., Cohen, A. B., Meyer, K. K., Varley, A. H., Brewer, G. A. (2015). Costly Signaling Increases Trust, Even Across Religious Affiliations. *Psychological Science*, 26(9), 1368–1376. <https://doi.org/10.1177/0956797615576473>
- Henrich, J., Heine, S. J., Norenzayan, A. (2010). Beyond WEIRD: Towards a broad-based behavioral science. *Behavioral and Brain Sciences*, 33(2–3), 111–135. <https://doi.org/10.1017/S0140525X10000725>
- Henrich, J., Henrich, N. (2007). *Why Humans Cooperate: A cultural and evolutionary explanation*. Oxford: Oxford University Press.
- Henrich, J. (2009). The evolution of costly displays, cooperation and religion: credibility enhancing displays and their implications for cultural evolution. *Evolution and Human Behavior*, 30(4), 244–260. <https://doi.org/10.1016/j.evolhumbehav.2009.03.005>
- Chvaja, R., Řezníček, D. (2019). An Integrative Framework of Commitment Displays in Religious Systems. *Human Ethology*, 34, 41–52. <https://doi.org/10.22330/he/34/041-052>
- Irons, W. (2001). Religion as a hard-to-fake sign of commitment. In: R. M. Nesse (Ed.), *Evolution and the Capacity for Commitment* (pp. 292–309). New York: Russell Sage Foundation.
- Jerotijević, D., Maňo, P. (2014). Rituál a mysl: Kognitívni a evoluční teorie rituálu. *Pantheon*, 9(1), 139–166.
- Konvalinka, I., Xygalatas, D., Bulbulia, J. A., Schjødt, U., Jegindø, E.-M., Wallot, S., et al. (2011). Synchronised arousal between performers and related spectators in a fire-walking ritual. *National Library of Medicine*, 108(20), 8514–8519. <https://doi.org/10.1073/pnas.1016955108>
- Kravarčík, P. (Ed.) (2000). *Nová Bošáca v histórii: roky 1950-2000*. Nová Bošáca.
- Kravarčík, P. (2010). *Ludové tradície, piesne a tance z Novej Bošáče*. Nová Bošáca.
- Kukuča, J. (2016). *Osídlenie Bošáckych kopaníc*. Brno: Tribun.
- Lang, M. (2014). Náboženství a prosocialita v evoluční perspektivě: Základní mechanismy lidského sociálního chování. *Pantheon*, 9(1), 167–187.
- Lang, M., Purzycki, B. G., Apicella, C. L., Atkinson Q. D., Bolyanatz, A., Cohen, E., et al. (2019). Moralizing gods, impartiality, and Religious parochialism across 15 Societies. *Proceedings of the Royal Society B*, 286(1898), 1–10. <https://doi.org/10.1098/rspb.2019.0202>
- Lanman, J. A., Buhrmester, M. (2016). Religious actions speak louder than words: Exposure to CREDs predicts theism. *Religion, Brain & Behavior*, 7(1), 3–16. <https://doi.org/10.1080/2153599X.2015.1117011>
- Luther, D. (1995). Pochovávanie basy. *Encyklopédia ľudovej kultúry Slovenska* (zv. 2, s. 58). Bratislava, Vydavateľstvo SAV: Ústav etnológie SAV.
- Maňo, P. (2019). *Religious Ritual and Socio-Economic Status: A Study of the Kavadi Ritual in Mauritius*. Doctoral Dissertation submitted to Comenius University, Bratislava. Accessible at: <https://alis.uniba.sk:8443/lib/item?id=chamo:694227&fromLocationLink=false&theme=Katalog>
- McNamara, R. A., Henrich, J. (2016). Kin and Kinship Psychology both influence cooperative coordination in Yasawa, Fiji. *Evolution and Human Behavior*, 38(2), 197–207. <https://doi.org/10.1016/j.evolhumbehav.2016.09.004>
- Newson, M., Buhrmester, M., Xygalatas, D., Whitehouse, H. (2020). Go WILD, Not WEIRD. *Journal for the Cognitive Science of Religion*, 5(2), 1–27. <https://doi.org/10.1558/jcsr.38413>
- Ochodnický, D., Dzurák, P. (1994). *Bošácka dolina*. Bošáca: Obecný úrad a Miestny odbor Matice slovenskej v Bošáci.

- Pavlíková, M. (1999). Kronika a kronikár z pohľadu etnológie. *Etnologické rozpravy*, 6(1), 93–106.
- Power, E. A. (2017a). Discerning devotion: Testing the signalling theory of religion. *Evolution and Human Behavior*, 38(1), 82–91. <https://doi.org/10.1016/j.evolhumbehav.2016.07.003>
- Power, E. A. (2017b). Social support networks and religiosity in rural South India. *Nature Human Behaviour*, 1(0057), 1–6. <https://doi.org/10.1038/s41562-017-0057>
- Power, E. A. (2018). Supplementary material from “Collective ritual and social support networks in rural South India”. *Proceeding of the Royal Society B: Biological Sciences*, 285(1879), 1–7. <https://doi.org/10.6084/m9.figshare.c.4088636>
- Power, E. A., Ready, E. (2019). Cooperation beyond consanguinity: post-marital residence, delineations of kin, and social support among South Indian Tamils. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 374(1780), 1–9. <https://doi.org/10.1098/rstb.2018.0070>
- Purzycki, B. G., Arakchaa, T. (2013). Ritual behavior and trust in the Tyva Republic. *Current Anthropology*, 54(3), 381–388. <https://doi.org/10.1086/670526>
- Raihani, N. J., Power E. A. (2021). No good deed goes unpunished: the social costs of prosocial behaviour. *Evolutionary Human Sciences*, 3(e40), 1–21. <https://doi.org/10.1017/ehs.2021.35>
- Soler, M. (2012). Costly signaling, ritual and cooperation: evidence from Candomblé, an Afro-Brazilian religion. *Evolution and Human Behavior*, 33(4), 346–356. <https://doi.org/10.1016/j.evolhumbehav.2011.11.004>
- Sosis, R. (2003). Why aren't we all hutterites: Costly signaling theory and religious behavior. *Human Nature*, 14(2), 91–127. <https://doi.org/10.1007/s12110-003-1000-6>
- Sosis, R., Alcorta, C.S. (2003). Signaling, solidarity, and the sacred: The evolution of religious behavior. *Evolutionary Anthropology*, 12(6), 264–274. <https://doi.org/10.1002/evan.10120>
- Sosis, R., Ruffle, B. (2003). Religious Ritual and Cooperation: Testing for a Relationship on Israeli Religious and Secular Kibbutzim. *Current Anthropology*, 44(5), 713–722. <https://doi.org/10.1086/379260>
- Penn, D. J., Számadó, S. (2020). The Handicap Principle: how an erroneous hypothesis became a scientific principle. *Biological Reviews*, 95(1), 267–290. <https://doi.org/10.1111/brv.12563>
- Számadó, S., Balliet, D., Giardini, F., Power, E. A., Takács, K. (2021). The language of cooperation: reputation and honest signalling. *Phil. Trans. R. Soc. B*, 376(1838):20200286, 1–8. <https://doi.org/10.1098/rstb.2020.0286>
- Uhrin, M. (2020). *Kooperácia a náboženstvo v rurálnom prostredí na Slovensku*. Accessible at: <https://alis.uniba.sk:8443/lib/item?id=chamo:709250&fromLocationLink=false&theme=Katalog>
- Whitehouse, H. (2004). *Modes of Religiosity*. Oxford: Oxford University Press.
- Xygalatas, D. (2012). *The Burning Saints: Cognition and Culture in the Fire-walking Rituals of the Anastenaria*. London: Equinox Publishing.
- Xygalatas, D., Mitkidis, P., Fischer, R., Reddish, P., Skewes, J., Geertz A. W., et al. (2013). Extreme Rituals Promote Prosociality. *Psychological Science*, 24(8), 1602–1605. <https://doi.org/10.1177/0956797612472910>
- Xygalatas, D., Kotherová, S., Maño, P., Kundt, R., Cigán, J., Kundtová Klocová E., et al. (2017). Big Gods in Small Places: The Random Allocation Game in Mauritius. *Religion, Brain and Behavior*, 8(2), 243–261. <https://doi.org/10.1080/2153599X.2016.1267033>
- Xygalatas, D., Maño, P., Bahna, V., Kundtová Klocová, E., Kundt, R., Lang, M., et al. (2021). Social inequality and signaling in a costly ritual. *Evolution and Human Behavior*, 42(6), 524–533. <https://doi.org/10.1016/j.evolhumbehav.2021.05.006>

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