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On Mediation:

Ethnographic and statistical analysis of an Indian helpline for reporting "Sound abuse in public spaces"

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ABSTRACT

It is nearly impossible to characterize the nuisance associated with neighborhood noise in India. There is no centralized administration to gather noise complaints, and non-profit and civic groups do the little monitoring there is. This study concerns one such program, NISS (National Initiative for Safe Sound) in Kerala (southern India), where one of the authors conducted ethnographic research. One of NISS's main actions is running a telephone helpline for residents "to report sound abuse in public spaces." It provides the population with its first opportunity to speak out about the disturbing noises they endure, and is an invitation to nurture sonic citizenship via intermediation with noise-makers. Unlike governmental services that gather data in pre-established categories, the helpline foregrounds the fundamentally sociological aspects of sound annoyance. As part of its telephone exchange, the helpline maintains a register recording some personal information, details on the context of the noise, and the indicated sound sources. Ethnographic and statistical analyses are combined to precisely identify the social and geographical origin of callers, categories of sound sources, and the nature of the conflicts that emerge from relations of disturbance. This paper describes local singularities and remarkable differences with comparable, earlier studies based on "official" noise complaints in other countries. We favored an anthropological approach, offering an initial analysis of the profile of people calling in with complaints, and their highly conflictual relationship with the sounds entering the public space from places of worship.

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1. INTRODUCTION

Neighborhood noise research³ in acoustics and the social sciences relies primarily on governmental data sources. Work taking a situated approach to noise annoyance and "complaint mechanisms" is much rarer [1].⁴ Smaller-scale anthropological approaches address how people express annoyance [2]⁵ and what circulates through the walls between two apartments [3-4]. Working at the scale of official complaints is still an especially fertile approach, if we think of noise complaints as providing precise indications of the profile of the people who are disturbed, the incriminated sound sources, and the kinds of residential areas where environmental noise leads to conflict. Such information is recorded by most authorities overseeing noise management, who establish these services for the public. Examining the resulting data eventually allows them to establish descriptive statistics that could be used in urban planning or the development of policy for the improvement of urban sound quality.

Researchers specialized in the quantification of urban noise rely on government noise complaint data, some of which is available online or in archives, crossed with other available databases using multi-factorial analysis. These databases may concern urban morphology and density, like one such study of New York [5]. Other studies cross noise complaints with socioeconomic data on demographics, employment, real estate ownership, and/or factors of deprivation, such as one study in England [6]. The possibility of inferring from such data presupposes a harmonization of collection. In the cases cited above, registering complaints occurs through time-tested administrative procedures rooted in a stable territorial network, which makes it possible for them to subsequently match complaints databases with other administrative databases (of socio-demographic criteria, descriptions of the housing stock, etc.). Although the correlations between the complaint and these social and environmental factors seem to be well established, it is still tricky to conclude that there are ties of causality; that is, whether the callers in a neighborhood are more influenced by determinants tied to the population density of their building or neighborhood, or by those stemming from their socioeconomic class. We can't refine this type of statistical validation using our case study in India, mainly because the noise complaints are not systematically analyzed by governmental authorities as they are in the United States or England.

Christine Guillebaud conducted ethnographic research on the National Initiative for Safe Sound (NISS), a program for the promotion of auditory health, in Kerala (India). The program sponsors awareness campaigns, educational programs, recommendations for safe sound exposure, and other measures intended to protect hearing and prevent hearing problems. One of the leading actions of NISS was the inauguration of a dedicated helpline to report annoying noise in public spaces in 2014. This was the first time the public had been given an outlet for talking about the irritating sounds they are exposed to in daily life, and the first appeal to foster a sense of sonic citizenship, a sense of civic responsibility through mediation. The service was installed in the offices of the Indian Medical Association in Trivandrum, the capital of Kerala. Unlike governmental services that gather data in predefined categories, this helpline reveals the fundamentally sociological dimensions of the disturbance. Telephone

³ There are many definitions of "neighborhood noise," so exclusive conception is impossible. Definitions may concern the kind of source (proximity, but excluding, for example, the sound of transportation and industry); the type of place (public or private), or the status of the people (civilian, social position) experiencing noise. We retain the three-part definition of Amphoux, Leroux *et al.* [1] based on the fixedness of the source (making it identifiable), the perception of noise from private or residential places; and the presence of a collective dimension (whether the noise is "normal" or "conflictual," for example), p. 12.

⁴ This large-scale study was based on complaints filed with institutions in France and field data (accounts from daily life and ethnographies based on field observation).

⁵ The cited article is mainly focused on attitudes to airport noise, which is rarely considered « neighborhood noise » as previously defined.

helpline workers maintain a register where they note some personal data along with details on the context and origin of the irritating sound. Christine Guillebaud's ethnographic research in the NISS helpline service led her to participate in the analysis of all the data collected since its founding. The scale of this helpline is closer to localized call studies than it is to the aforementioned statistical analyses. The anthropological approach favored in this article offers an initial analysis of the profile of callers and their highly conflictual relationship with the sounds emanating from places of worship in the public space.

2. AT THE END OF THE LINE: A BRIEF FORAY INTO DESCRIPTIVE STATISTICS

Two years after the opening of the helpline, the head of NISS, Dr. Muhamed Shaffi, gave Christine the content of the register, corresponding to the 417 calls⁶ first recorded but not yet analyzed. He had already started digitizing the register and entering it into an Excel spreadsheet that had been divided into ten fields to facilitate the service's intended statistical treatment. All of the data was also fully translated into Malayalam and English (see Figure 1). After returning to France, Christine developed plans for extracting descriptive statistics with Brian Chauvel.

Unlike studies focused on the data produced by governmental administrations or non-profit organizations dedicated to noise, the following analyses were established on the basis of helpline data prior to harmonization. Access to this early form of data is precious because social scientists almost always work with survey results that were obtained from public institutions (municipal or regional authorities), and they rarely have access to raw data and how it is collected. Ethnographies of hotlines and how they categorize complaints are often fragmented because researchers often come late to the process, at the end of the line. Although these statistics are valuable, they are nonetheless based on pre-imposed thought categories and a predetermined classification of sound sources. This makes it impossible to analyze how consensus is formed prior to quantification: noise is less a physical phenomenon than a category shaped by public intervention, which is shut in a black box of administrative performance metrics. Consequently, crossing data is a great challenge for researchers.

Ethnography of helpline interactions and access to the raw register made it possible to pursue research questions that differed from the declared objectives of the Indian Medical Association, although they initiated the telephone service. On such question is the religions of callers and who they blame for noise disturbances. We thought it important to identify or deduce religion because a significant proportion of the annoying sounds noted in the register came from places of worship. This question was secondary in the agenda of NISS program founders, who were primarily doctors and health professionals rather than anthropologists.

2.1. The creation of indicators

The information gathered by the helpline was sorted into columns in the register corresponding to the main categories likely to be useful for noise analysis. The preliminary step was structuring this information to use these categories into indicators and variables for quantitative analysis. The NISS program had made the register in an initial form that didn't include all the information we needed for a thorough analysis, a common situation when working, like historians, on raw data. We thus first chose to focus on dates and addresses, and define the rules in order to extract a relevant terminology that could then be used to classify callers – for instance, according to their religion and the sources of noise eliciting complaints.

⁶ For the subsequent 66 calls, Christine entered the hand-written data and English translation into the spreadsheets provided by NISS. Because this data is incomplete, we decided to retain only the first 442 calls. ⁷ This incomplete aspect has been noted by other authors. Examples include a study based on archives, reports, and statistics concerning noise compiled by the city of Angers, France [7] and a large-scale study on data provided by the government of Montevideo, in Uruguay [8].

	NATIONAL INITIATIVE FOR SAFE SOUND Public Complaints Register								
Id No: A	Age	Sex	Location	Address	Date	Time	Cause(complaint in sentences(Verbatim)	Specific Reason	Action on compla
				Hon. Home Minister					
				Kerala State, Sree					He expressed appreci
1 A	١.	М	Thiruvananthapuram	Ramesh Chennithala	30.12.14	2.10 pm			in our response.
									Called 2020 no
									response(Collector's
							Thirumala Junction 944		control room -sound
2 5	0yrs	F	Thirumala	Smt.May	30.12.14	3.25 pm	in religios occasion & music in very loud noise.		pollution)
				Minaselumperemail,					
				Eerattupetta			Using loud speaker on a religious occasion at Varkala		
3 A	١	М	Shiuvagiri	954 *********	31.12.14	10.55 pm	Shivagiri		Common complaint-o
				Strattanth Wennesday,			putting devotional song in a loud noise in Neduman		
4 A	4	М	Maruthoor	Tvm- 949	31.12.14	11.00 am	Devi Temple, ph:0472		Informed to Taluk Off
							949 934 7646 Using loud speaker in the nearest		
				Kutskrishnan, Trissur,			church & making noise , in some days exending up		Forwarded to collecto
5 A	4	М	Cherpp Ponchanguthi	Cherpp Ponchanguthi	31.12.14	11.00 am	to night 1'o' clock		done on 10/01/15
							Brahmapuram Devi Temple, creating High noise		
		_		n			(420 + 020 000FFF0402/U ·		l,

Figure 1: Call register, translated and entered into an Excel spreadsheet.

2.2. Who calls?

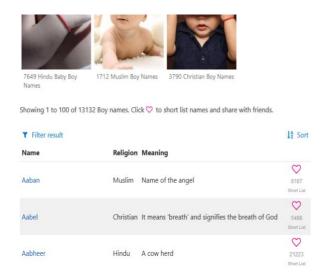
2.2.1 Population by sex

Who calls the helpline? Caller gender is thoroughly noted: we know that nearly 83% are men. However, within weeks of the hotline's opening, the NISS team decided not to ask caller age, and gave up on the idea of taking on-site sonometric measurements. Their advisory mission probably took precedence over the course of their prolonged interactions with the population, and also reoriented how they collected information.

2.2.2 Identifying religion based on given name

We used callers' given names to identify their religious affiliation and classify them by faith. We had to find a way to inform this analytical category because the information was not included in the register. Several steps were needed to assign a religious attribution to caller names. In the first step, Christine Guillebaud used her field experience to manually code the association of each given name with a given religion (H for Hindu, C for Christian, M for Muslim). Brian Chauvel then compared this data with comparable categorizations on the Internet, particularly websites with baby names for future parents. If we had followed the rules of art, we would have obtained civil records with names and declared religious affiliation, but this kind of data in unattainable without intimate knowledge of Indian governmental data and its distribution networks. While the Indian census provides information on caste and religion, we do not know if it is found on birth certificates. Consequently, we applied the principle of economy and simplicity, since we were not conducting a sociological study of given names.⁸

⁸ For an example of the sociology of given names, see [9].



Prokerala's category	n	%
Hindu	9221	43
Christian	8401	39.2
Muslim	2912	13.6
Christian & Hindu	785	3.7
Christian Hindu Muslim	51	0.2
Christian & Muslim	39	0.2
Hindu & Muslim	31	0.1
Total	21440	100
·		

Figure 2: Distribution of the 21,440 given names on the website Prokerala, by religious affiliation

The website Prokerala ranks given names by sex and religion: Christian, Hindu, or Muslim. Although the vast majority appear in only one of these categories (95%), some are found in two or all three, an ambiguity that reminds us that attribution of religion according to given name is imperfect and complexifies analysis. To simplify the process, we built one "religion" variable with three exclusive modes, and sorted cases of multiple possibilities using Christine's coding: if a given name is identified as both Christian and Hindu on the website Prokerala (counted once on each list), we retained the mode on Christine's list. Experiential knowledge of usage was thus used to choose the appropriate category to clear up ambiguities.

PRelig	PRelig_T	Given Names
Christian	0,7	Shiju
Hindu	1	c("Prasanna", "Nair")
Hindu	1	Mohan
Hindu	1	Biju
Hindu	1	Biju
To be verified	NA	c("Manoj","Mathew")
Muslim	1	Hazib
Hindu	1	Menon
Christian	0,7	Reji
Hindu	1	Raju
Hindu	1	Rajesh
Hindu	1	c("Sarath","Chandran")
Muslim	1	Aneez
Hindu	1	Unnikrishnan
Christian	1	Thomas
Hindu	0,7	Prasanth

Figure 3: Coding religions using given names

Furthermore, several given names may appear in the same field, like "Sarath" and "Chandran". This is because our search was automated, based on strings of characters, which can artificially extract place names from the "address" field of the register if they resemble a given name; errors are indeed possible. With this coding, the scores inform us how to categorize, as in this example:

Prasanth 0.7 = 2 of 3 are Hindu (rounded to 2/3).

"Prasanth" was listed as Hindu and Christian on Prokerala, but Christine declared it Hindu in her manual coding, so Hindu was chosen.

Attribution of a religion according to given name presents problems beyond classification. Although we found a way to resolve ambiguous cases, in so doing we removed an indicator of a phenomenon that resists this kind of classification, so our methodology is imperfect. We gained in efficiency (since the aim was to obtain the clearest table possible) without losing sight of the difficulty of attributing a religious identity solely on the basis of a given name. A website classification may be a good indicator of current conceptions of given names and their religious associations, but it is less objective than civil records. In addition to this problem, our method postulates a single and permanent religious identity. This is not a serious issue in the state of Kerala, but it would have been problematic in other regions where individuals can have multiple religious identities.

This reifying procedure wouldn't make sense in a study of religious attribution, but it works in a study that includes religion as a potential explanatory parameter of how people relate to noise. Remember that websites like Prokerala provide relatively clear boundaries in religious attribution – in the vast majority of cases, each given name is associated with only one religion. We did not consider boundary porosity and the small number of ambiguities relevant, but we did take care to sort them out with our scoring system. The degree of doubt is thus clearly established. We know the distribution in ambiguous cases (like Hindu-Muslim, above). With 31 cases out of the 21,400 names in the Prokerala database, we control the arbitrariness and our choices are explicit.

2.2.3 Caller religion

Validated category	n	%
Hindu	190	66.4
Christian	53	18.5
Muslim	36	12.6
To be verified	7	2.4
Total	286	100

Figure 4: Distribution of calls according to caller religion

Of the 442 calls in the register, 286 have a given name that we associated with a religious category: 66.4% came from Hindus, 18.5% from Christians, and 12.6% from Muslims. In Kerala, the population is 55% Hindu, 18.5% Christian, and 26.5% Muslim. Relative to the general population, Hindus are over-represented among callers (+11.4), Muslims underrepresented (-13.9), and Christians perfectly proportional. It thus seems that Hindus felt more concerned by the telephone hotline and the array of awareness-raising actions (like the

⁹ Census of India, 2011.

Ministry's appeal and publicity about the register) than Muslims, who made comparatively little use of the line.

This comparison provides an initial indication of a cause of annoyance (some feel more concerned than others), but it does little to help us understand the underlying attitudes where religious sounds or those coming from places of worship are concerned. This calls for the formulation of new hypotheses on the dynamics of the relationships between the three religions. At this stage, we only have the callers' perspective. In reality, every sound problem is fundamentally relational, so it is more related to the *noise-makers* than it is to the *callers*, the only ones with a known religious affiliation at this stage. As we will see, this distribution of calls requires the study to go from percentages to an exploration of the relations between each caller (of a given faith) and his or her noisy neighbors (of the same religion or not). But for now, we will continue our presentation of statistics obtained from other elements of raw data in the register.

2.3. Causes of disturbance

2.3.1 What do people complain about?

One observation emerged rapidly when we defined and analyzed the language callers used for describing sources of noise annoyance (see Figure 5). Places of worship are the leading cited sources of noise recorded in the register (in the column "complaint in sentences, Verbatim"): 267 calls (62%) mentioned a place of worship. Among these calls, 201 concern a Hindu temple, 32 a Christian church, and 25 a Mosque (see Figure 6). In other words, Hindu temples and people are over-represented in the perception of noise: 75% of calls complaining about a place of worship designate a Hindu temple, and 66.4% of identified callers are Hindu, in contrast to 55% of the population.

```
TEMPLE <-"Temple|Koil|Kovil|Kavu|Kshetram|Kshethram|Devi|Gurumandhiram|Pothiyalambalam|Baba Bhaganan Centre|Ayyappa season|ambalam"

CHURCH <- "Church|pentecost|Penta coast Sabha|pentacost|Bethel|pentacoast|christmas"

MOSQUE <- "Mosque|masjeed|Mazjith|fathimatha sound|Nabidinam"
```

Figure 5: Lexicon of places of worship

Place of worship					
mentioned in the verbatim	n	%			
Temple	201	46.5			
None	164	38			
Church	32	7.4			
Mosque	25	5.8			
Temple - Church	6	1.4			
Temple - Mosque	3	0.7			
NA	1	0.2			
Total	432	100			

Figure 6: Place of worship referenced in the calls

If the predominance of places of worship is undeniable, it is still difficult to qualify them because each term may designate either the producer of the noise or the place where the noise is being made, which don't mean the same thing: a simple reference to a religious site isn't necessarily a complaint about the site itself. Simply counting the number of times each term was used is thus inadequate. Case-by-case analysis was required: is the noise coming from the temple, or is it in the vicinity of the temple? Although it wasn't always easy to make a finer distinction by reading the register, we nonetheless noted that complaints were very often about the temple itself, because callers often called specifically to report problems of amplification. It was specifically the sound from microphones and speakers, and then that of the temple, that was reported, rather than nearby noises like the cry of the fish peddler in the streets around the temple. Other callers reporting other irritating noises indicated business names and activity when they called, which confirms that people annoyed by noise have generally identified its source.

We have noted that the distribution of calls is disproportionate to religious distribution, with an over-representation of Hindus, and that this is even more true when considering places of worship. Now let's turn to the relationships between callers and places of worship.

2.3.2 Places of worship: Callers' sound environments

The next phase of research was driven by the question of whether the noises people complain about differ according to the population category placing the call. We continued our analysis of noise through its relational dimension, testing the hypothesis that noise disturbance was interconfessional. For example, do people complain more about mosques and temples if they are Christian? This led us to study the connections between the cited place of worship and the religion of the person complaining about it (see Figure 7).

Designation of a place of worship by given name							
	None	Church	Temple	Mosque	Total (%)	Total (n)	
Christian	38.8	8.2	53.1	0	100	49	
Hindu	35.5	9.1	48.4	5.4	100	186	
Muslim	<i>55.6</i>	2.8	22.2	13.9	100	36	
to be verified	66.7	0	16.7	0	100	6	
NA	35.5	6.5	49	6.5	100	155	
Total	38	7.4	46.5	5.8	100	432	

Figure 7: Designation of places of worship according to the religion of the person submitting a complaint

Altogether, a little under half of the complaints (47%) concern temples, but the proportion varies according to religious affiliation of the caller: it is slightly higher among Christians (53.1% of whom call to complain about temples) and much lower among Muslims (22.2%, and this from an already small number). Inversely, Muslims are proportionally more likely to complain about mosques (5 of 36 complaints from Muslims are about mosques, which are only the object of 15 complaints in total) but mostly call to complain about noise sources other than places of worship. This distribution should mainly be understood in connection with the lay of the land: Muslim neighborhoods are probably farther from temples than Christian neighborhoods.

3. **CONCLUDING REMARKS**

It is nearly impossible to characterize the annoyance associated with neighborhood noise in India because there is no centralized administration to receive noise complaints and no oversight beyond civic initiatives run by non-profit organizations. This study of the non-profit NISS program nonetheless found some local singularities and remarkable differences with studies based on "official" noise complaints in other countries.

Concerning the callers's profiles, the literature on complaints frequently finds that women are relatively more likely take measures to protest noise [10]. In Kerala, it is men who are over-represented, to the point that the NISS program dropped gender in the final version of its register. This point shows that there is no unambiguous connection between experiencing an annoyance – in the domestic sphere, where women are in the majority during the day – and the decision to declare the noise with a hotline. This inversion of the sexes particularly sheds light on the dimension of social authority that is at work in every noise problem. Difficulties tolerating intrusive sounds are thus not solely related to the sphere of exposure; they also involve publicizing or even "officializing" one's annoyance and socially positioning oneself relative to the institution running the hotline and, indirectly, the noise-makers. Analysis and statistical treatment of raw data from the register sheds light on certain stereotypes of the supposed greater sound sensitivity of particular people that mustn't be taken as universal. This observation concerning women raises the same question for other categories of people, like city-dwellers, the elderly, and so on.

Working from the register's raw data revealed issues that are rare in ready-made statistics provided by an institution. We produced our own statistics, taking account of the nature of the available data and its qualitative and quantitative relevance. This article, focused on the questions "who calls?" and "who is being complained about?,"10 introduces a relational dimension that is rarely addressed in work on "official" noise complaints. It paves the way for reexamining common perceptions of irritating sounds from places of worship. In a social space shared by three large religious communities, excessively amplifying the public space does not automatically dictate how residents experience it. From religious authorities' perspective, they are usually trying to draw attention to the place, spread the fame of a festival, compete with other sound events, or even rival other nearby religious spaces. From the perspective of people living nearby, their discourse is limited to merely enduring the physiological and psychological effects. For callers, it is also striking to note that their complaints are mainly about Hindu temples and Christian churches, and that ultimately their religion has little influence on their decision to make a formal complaint about the noise. In the field of sound studies, work on religion devotes much space to the signature of the call to prayer in Muslim settings, its aesthetic and political stakes, and its capacity to designate territories. The case of the Kerala hotline demonstrates that amplified calls to prayer are not that disruptive overall, and that few neighbors of mosques react to the sounds of other Muslim celebrations in their neighborhood.

Furthermore, these observations challenge certain stereotypes supposing sonic communalism that, is not confirmed by the noise complaints registered by the hotline. Sonic communalism is irrelevant to people suffering from noise, and their tolerance is no higher for the sounds of their own religion than it is for the sounds of others. This observation demonstrates that neighborhood relations, revealed clearly by declarations of noise annoyance, have a fundamentally spatial and sensory dimension. The sense of neighborhood induced by irritating sounds structures individuals just as much as their caste and religious

¹⁰ Other results from this study will be published at a later time: a temporal and spatial analysis of calls, identification of other sources of noise disturbance, analysis of the effects of social divisions.

affiliation, albeit differently. When speaking of annoying sounds, people didn't indicate their referent (identity or social group), or how they situate themselves relative to others in the social space. This is likely why neighborly relations is still a neglected corner of the sociology of groups and religion. Recent work nonetheless sheds light on the topic using more sensitive descriptors. We have in mind examples like the notions of "living side-by-side" used to speak of the economy of sound in a market in Sabra [11], "affordance of sound events" used in the ecology of perception-action [12-13], and "emergence," used to account for the complexity of managing the sound of everyday flows of individuals and groups in a bus terminal in India [14]. These theories all share an interest in the capacity for positioning, action, or even competition between actors. What is it in relations of annoyance that interest us here specifically? Noise seems to make ties of an entirely different nature: more particularly, it reveals "an ethic of neighborliness," to use philosopher Hélène L'Heuillet's expression [15]. "Where is the social tie made, if not first with those closest to us, with these primary others who are neighbors, in making a common place? (...) Being neighbors is not the association, but it constitutes a tie nonetheless" (p. 9).

Relations of annoyance provoked by "abusive sound" are not a matter of inclusion or exclusion, or even the alterity that otherwise largely fuels social relations. Noise disturbances acoustically reveal sensory forms of spatial cohabitation. Recognition of abusive uses of sound thus contributes to the construction of a *common* beyond the acoustic characteristics of sound sources, one that transcends the socio-religious affiliations of the concerned actors.

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