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THE third segment of one of Chile's most successful movies, *El Chacotero Sentimental* (*The Sentimental Joker*) of 1999 transformed everyday life in social housing estates into a matter of national concern and debate. This debate was driven not by the poor quality of the buildings or their high crime rates, but by something much more commonplace: the lack of intimacy suffered by the residents. The segment, called "Todo es Cancha" ("Everywhere Is a Pitch"), tells the story of a young couple, residents of Villa el Volcan, one of the largest social housing estates in the country. It focuses on their difficulty experiencing sexual intimacy because the neighbors can hear everything they are doing—a result of the poor quality of the building.

This problem is not unique to Chilean housing estates. Similar situations have been commonly found in housing projects throughout the world. Even Richard Sennett talks about this when recalling his mother's impressions of Cabrini Green, the housing estate in Chicago where he lived when he was a child:

What initially struck her, though, was the noise outside. The apartment seemed "like a beleaguered ship. Around it, from

early morning until far into the evening, there rose a sea of
sound…voices screaming, laughing, wailing, shouting."   Sennett

The story reflects, in an extreme way, a problem that is
common for all the inhabitants of social housing estates.
Surveys and ethnographic studies have shown that noise is one
of the main problems of living in one of these housing solutions.
Along with alcoholism, drugs, and crime, and sometimes even sur-
passing them, noise always appears when residents are asked about
the aspects that they don't like about the estates.

In this context, the aim of this paper is to study the perception
and consequences of noise in one particular setting, a social
housing estate located in Santiago, Chile. More specifically, we
are going to analyze noise in its double nature as a spatial/material
and social phenomenon. As a spatial/material phenomenon, noise
is related to the minimal sound isolation provided by low-quality
building materials and the proximity of the flats, characteristic of
housing solutions developed for low-income populations in Chile
in the last decade. As a social phenomenon, noise is related to the
lack of strong ties and solidarities among the neighbors of
the estate and their incapacity to agree on regulations to improve
their current living conditions.

This paper begins with a summary of the main theoretical and
empirical developments regarding noise and the quality of life in
urban spaces. The second section briefly presents the field under
study while the third and fourth sections deal with the spatial/
material and social aspects of the problems with noise in the
housing estate. The fifth section analyzes what noise means in
terms of the overall experience of living in the housing estate
and the different tactics developed by residents to fight against
noise. The final section suggests potential solutions for the
problem of noise in housing estates.

Noise, Urban Space, and Quality of Life

What exactly is noise? In order to answer this question we must
start by giving a definition of sound. Berglund and Lindvall
define it as

Physically, sound is produced by mechanical disturbance
propagated as a wave motion in air or other media. Physical
sound evokes physiological responses in the ear and auditory

pathways.. . .Psychologically, sound is a sensory perception originating as a mental event evoked by physiological processes in the auditory brain.

For human beings, sound is a kind of sensory perception that occurs as a reaction to a perceived change in their physical environment. Under normal circumstances, any perception of this kind will be interpreted by the individual as a sound.

In this context, we can define noise simply as a type or, even better, as a category of sounds. The point is that physically "there is no distinction between sound and noise . . .consequently, it is not possible to define noise exclusively on the basis of the physical parameters of sound." A sound that is interpreted as noise has no particular loudness or intensity, but is defined in relation with other sounds or with silence. *The Encyclopaedia Britannica* defines noise simply as "any undesired sound, either one that is intrinsically objectionable or one that interferes with other sounds that are being listened to."

Berglund et al.

It follows that the recognition of a sound as noise depends exclusively on the perception of the listener and the contexts in which he or she is experiencing the sound. This judgment is usually based on many different criteria and varies considerably from listener to listener. But it has one central element in common. For a sound to be considered as noise, it has to produce some degree of discomfort. It has to interfere in a deter-minate way with the sounds that the listener considers normal or pleasant. The unpleasant aspect is quite clear when we consider the etymology of the word in English. The word "noise" can be traced to the Latin word *nausea*, meaning "seasickness, feeling of sickness." A noise is always a sound that causes disturbance, an unwanted interference. In this sense, the content of noise is irre-levant. Regardless of whether it is loud music, the sound of traffic, or a power drill, the only thing that matters is the perceived unplea-santness, not the particular sounds that prompt such perception.

This characteristic of unpleasantness shows a second particu-larity of noise perception: it tends to be attributed to externally produced sounds. As we will see throughout this paper, every time the people under study use the word noise (or any synonyms) they are referring to sound produced by other people. Commonly, and in accordance with the findings of Stokoe and Hepburn, when people think or talk about noise they "present themselves as reasonable, disinterested, ordinary folk who are, crucially, passive recipients of noise from next door." In this sense, noise

is an external and passive concept, rarely created but commonly suffered. In most of the cases where people talk about their own use of sound, they refer to themselves as "playing music," "listening to radio," etc. but never to making noise. The closest that they get to considering their own sound as noise is to acknowledge that they like to listen to "loud" sounds. These are loud sounds, not noise. Noise is made by others.

But noise is not only a source of individual nuisance or discomfort. Throughout the world we can observe, from the media to public policy, a concern about the unwanted consequences of noise, especially in urban spaces. Noise is starting to appear as one of the central issues to resolve in the management of urban life, forcing the development of legislation and policies focused explicitly on its control. The relevance of such measures is given by the fact that noise

> is a well-established cause of hearing impairment and loss, as well as a cause of sleep disturbance, annoyance, chronic cardiovascular effects, increased psychiatric disorder, reduced psychosocial well-being, reduced cognitive performance, and impaired growth.

Schell and Denham

Along with the health effects, noise also has a strong negative effect on the social life of communities and individuals. Even though these effects have received much less attention than the health and psychological effects, the available research suggests that noise is a "community stressor," is associated with major social malaises such as crime or dirt; and is one of the key contributing factors to the deterioration of the quality of life in contemporary cities, especially in living areas. Above all, this noise is experienced "as destruction, disorder, dirt, pollution, and aggression against the code-structuring messages." Even when this behavior does not produce concrete physical damage and it is simply interpreted as a "lack of respect," this does not mean that it is less damaging, as Richard Sennett reminds us:

Arkette
Cloonan and Johnson
Gee and Payne-Sturges
Jiron and Fada
Gee and Payne-Sturges

Attali

> Lack of respect, though less aggressive than an outright insult, can take an equally wounding form. No insult is offered to another person, but neither is recognition extended; he or she is not *seen*— as a full human being whose presence matters.

The importance of noise is such that in an analysis of the quality of life of the world's 100 largest cities, noise level was considered among the "top ten" variables that affect urban quality of life along with central, and well-known, urban problems such as Sufian housing, public safety, and education. Noise, then, is not a secondary characteristic of urban life, but is "the most ubiquitous pollu-Alberti tant," invisible and evanescent in nature but much more pervasive and not less dangerous than any other form of contamination.

At the root of the problem with noise in living areas is the difficult relationship that exists between material and sonic spaces. Given the non-material status of sound and its capacity to go through physical barriers, sonic boundary construction is an operation much more complicated than that of material space. "Sonic space does not follow the same rules as physical space. Sound cannot be contained within four walls unless the room is highly Arkette absorbent." In our everyday lives, the boundaries between geographical and sonic spaces of our houses frequently do not match. This is true for parties and public events held at home where the limits of the sonic home largely exceed its material dimensions, but also in the case of the entrance of unwanted sounds from the environment, such as a car backfiring in the street or the sound of children playing in our adjacent neighbors' flat. To look or ask for a perfect match between sonic and geographical space is almost impossible and unaffordable for most individuals. To live with others' sounds in the city has been part of the cost associated with the "urban" condition, from the very Garrioch beginning of modern cities. Resulting from this, "part of the clamor of modernity is a public sonic brawling, as urban space Cloonan and Johnson becomes a site of acoustic conflict."

One main issue to keep in mind when studying noise and its negative effects on quality of life is that noise is not equally distributed in the population. As it has been widely demonstrated, the exposure to noise on an everyday basis is negatively associated with family income. Poorer individuals tend to live in noisier environments with the consequences to their health and communal life described above. For example,

A nationwide survey of major U.S. metropolitan areas found a strong, adverse correlation (r D ¡0.61) between household income and 24-h average sound level exposures. Households with incomes below $10,000 had average sound exposure levels more than 10 dBA higher than households above Evans and Kantrowitz $20,000 annual income.

Also the results of the last "American Housing Survey" of 2005 shows that people located below the poverty line are twice as likely to report the recurrent hearing of their neighbors' noise in their house (25.9 percent to 16.8 percent) and to find its loudness bothersome (8.5 percent to 4.8 percent) than the average of the population. Other research carried out in the city of Birmingham, U.K. concluded that "the highest estimated noise levels were coincident with the most deprived neighborhoods." Low-income zones are the areas that concentrate the highest levels of noise in cities and should receive special attention by scholars researching the recurrence and consequences of noise in everyday life.

U.S. Department of Commerce

Brainard et al.

Finally, it is also worth noting that in doing research we cannot treat noise as a single entity. Every noise is different from another in its nature, characteristics, and effects. Until now, the research in the area has concentrated on the study of massive sources of urban noise especially transport, in the form of road traffic, airports, and industrial activity. Less attention has been given to noises produced inside living areas. With a few exceptions, little research has been done specifically in domestic settings about the production and perception of noise among its inhabitants.

Burningham
Langdon
Stansfeld et al.
Espey and Lopez
Hygge et al.
Morrell and Lu
Hirai et al.
Melamed and Bruhis
Froom et al.
Grimwood and Ling
Jiron and Fadda
Stokoe and Hepburn
Utley and Buller

These few studies of domestic noise, based on the analysis of complaints about noise by different populations in the United Kingdom and one case in Chile, concluded that noise is a growing problem of urban everyday living in all the cases under study. Regarding its causes, Utley and Buller conclude that "while the increase may have arisen in part from changing attitudes to noise and an increased awareness of action available to abate nuisances, the major reason for the increase is a growth in the incidence and/or level of noise." In most of the cases, the increase in the levels of residential noise is associated with loud music, similar to the findings of this paper as we will see.

Field of Study and Methods

The research on which this paper is based was conducted during ten months in 2004 in an urban location in the city of Santiago, Chile. More specifically, the study was focused on 20 low-income families, inhabitants of a social housing estate called "Tucapel Jimenez II."[1] The estate is located on the western edge of the borough of Renca, in the north-western limit of the city of Santiago. It was built by a private housing company on behalf of the Chilean Housing and Urbanism Service (SERVIU) of the

[1]*Named after Tucapel Jimenez (1921-1982), a union leader assassinated by Pinochet's intelligence agency (DINA) members in 1982.*

government of Chile, and it has been inhabited since June 2002. The housing estate is made up of 876 flats arranged in groups of three-story, o-shaped buildings with an average of 24 flats each as can be seen in Figure 1.

This estate is an interesting site for doing research because it is representative of the virtues and defects of Chile's revolutionary social housing policy of the last decades. Between 1980 and 2000, around 173,000 social housing units were built in Santiago. The program was successful in providing housing programs in the developing world: the provision of housing for the population with the lowest income. As a consequence of this increase in the social housing stock, today approximately 70 percent of the low-income population of the city live in a social housing estate. Most of those who used to live in shantytowns on the outskirts of the city now live in one of these housing units, having access for the first time to decent housing and basic services such as drains and tap water.

But this new living situation also gave rise to new problems that were associated with the development of a new kind of social exclusion that has been called "new urban poverty." In housing terms, the issue to be tackled changes from the problem of "los sin techo" (those without a roof or home) or the traditional lack

Tironi

Rojas
Rojas and Greene

Tironi

Bengoa
Raczynski and Serrano
Wilson

FIGURE 1
Tucapel Jimenez II Housing Estate:
Location and Plan of the Buildings

Source: Google Maps

of decent housing for the poor in developing countries to the problem of "los con techo" or the problem of low-income groups who already have a house, commonly provided by public social housing programs, but who have developed new critical housing problems. Ducci identifies three main negative effects of Chile's current social housing policy:

- the fast transformation of the new housing estates into ghettos, isolated from the rest of the city
- the bad quality and size of the houses and the impossibility of introducing changes in the houses
- the dissolution of traditional social networks and solidarities.

As a result of this, "the residents in these housing estates are generally people who are unsatisfied with the quality of their everyday lives." According to a housing satisfaction survey, 45 percent of the residents questioned said that they wanted to move to another place, but they could not "because they are poor and there are no other housing alternatives."

The negative effects of the current policies in social housing can be found not only in relation to the population that already lives in one of the housing estates, but also in the structure of the city itself. As the private developers of these housing projects look for the cheapest land on which to build, the estates tend to be located on the periphery of the city, contributing to the enlargement of the urban area and to the increase in the level of spatial and socioeconomic segregation of the city.

Along with this situation there is another factor that makes life in housing estates complicated: the social mixture of its inhabitants. For example, the inhabitants of Tucapel Jimenez II came mainly from two very different former conditions of life. Around 40 percent of them came from different shantytowns or *campamento*s in the borough of Renca. The living conditions in these *campamentos* were very basic, especially in terms of the quality of housing (made commonly of light materials) and of access to social services such as health and education. The remainder of the inhabitants (around 60 percent) were families that were applying to the different regular social housing programs offered by SERVIU. Most of them used to live in Renca or in other neighboring boroughs; commonly in situations of "allegamiento" (backyard accommodation) in houses of relatives but in general in far better conditions than in a shantytown. This situation in some way resembles the mixed income or "social mix" policies for

Rodriguez and Sungranyes

Rodriguez and Sungranyes
INVI

Rodriguez

Tironi
Ducci
Sabatini

Atkinson and Kintrea

Brophy and Smith
Rosenbaum et al.
Ostendorf et al.
Arthurson

housing estates in countries such as the United Kingdom, the United States, Netherlands or Australia but with the difference that the mixture does not explicitly contemplate any clear policy in terms of initiatives to help the integration between groups with different socioeconomic and cultural backgrounds. As a result of this, those living in the estates during the period of the research project were divided into two groups: *los del campamento* (*people from the shantytown*) usually with lower income, social capital, and educational attainment, and *los de la reserva* or people who came from the waiting lists of the social housing programs of the Ministry of Housing (the reserva ministerial) with relatively higher incomes, social capital, and education. A central part of the current social dynamic of the housing estate can be located in the tensions and conflicts between these two groups, as we will see.

The 20 families under study, half of whom came from a shantytown and half from other living situations, can be also characterized mostly as young adult couples (with an average age of 35 years) that have around 2.8 children, each one with an average age of 10 years. In terms of education, none of them had university or technical studies and only 68 percent finished secondary education. For this reason, the majority worked in the primary sector (as security personnel, taxi-drivers, blue-collar workers, etc.) and the levels of integration of women into the formal labor market was still very low. Only in two families did both parents have permanent jobs.

In terms of methods, the families were selected using a "snowball" sampling, starting with the family of Patricia, our gatekeeper in the housing estate. The research was based primarily on three series of in-depth interviews in their homes with all the adult members of the 20 families selected talking about their lives in the housing estate, especially in terms of their adaptation to their new living space (at the time of the interviews, they had been living in the estates for a year and a half) and their use of media technologies in this process. This material was complemented with more general information about the housing estate and the living conditions of the low-income population in Santiago in order to set a general framework for the analysis.

The Porous Spaces of the Housing Estate

Social housing estates in Chile have been built densely during the last fifteen years. That is, they are built by placing a high number

of flats within a small number of blocs, usually in the form of three-story buildings. One reason for this building pattern is for the private entrepreneurs building the estates to minimize their costs.

Tironi

Along with this density, another central characteristic of these estates is the poor quality of building materials used in their construction. As Ducci states,

Ducci
Rodriguez and Sungranyes

> Even though social housing estates are produced by different building companies that are theoretically free to choose their design, you can find a surprising similarity among the thousands of housing units produced throughout the country. The reason for this phenomenon is that, in order to reduce expenses, designs are defined by the minimum demanded by the building regulations and they repeat it at infinitum in any zone of the country.

These savings on building materials and design result in housing of a very low quality that tends to deteriorate quite fast.

This situation resembles what happened with most of the large housing estates built in Europe in the post-war period. Due to the acute shortage of housing, those estates were also made trying to economize on building materials with the result that they "have developed from unproblematic and attractive places to live in to areas that are very problematic in many respects," not least in terms of the physical decay of the dwellings.

Dekker and van Kempen

One of the worst consequences of this low quality is in terms of acoustic isolation between the flats, as can be se seen in Table 1, which summarizes the five most frequent problems presented by houses in social housing estates in the metropolitan area of

TABLE 1
Most Frequent Problems Presented by Houses in Social Housing Estates in the Metropolitan Area of Santiago

	Has Presented a Problem	*Is a Serious Problem*
Acoustic Isolation	**77.6**%	**48.6**%
Size of the Spaces	61.2%	43.3%
Leaks	61.2%	34.4%
Minor Adjustments	53.0%	31.7%
Fitting, Sewage, etc	51.1%	33.4%

Source: (INVI 2002)

[2]*Something that gained national notoriety in Chile during the winter of 1997 with the famous case of the "Casas de nailon" [Nylon houses]. These were newly built social housing estates that could not keep out normal winter rains and had to be covered with nylon temporarily in order to prevent water leaking in.*

Santiago. As can be seen, over and above such serious and frequent problems as size of the flats or leaks[2], acoustic isolation appears by far the most common problem to the extreme that in almost half of the houses (48.6 percent) it is a serious one. This seems to prove the findings of other research carried out by Paola Jiron and Guilietta Fadda for whom sonic contamination in housing estates appeared as "one of the worst indicators of their quality of life."

Ducci

Why is acoustic isolation such a serious issue? It is mainly because building companies use the cheapest materials available in the partitions between flats—the walls, floors, ceilings—a situation that, along with closeness and high concentration of the flats, makes the lack of proper isolation from noise the first problem of their current living environments.

This situation is worsened by the fact that, as can be seen in Table 2, the living areas of Santiago are becoming increasingly noisy. As the comparison between two measures of ambient noise taken in 1989 and 2001 by the Metropolitan Service of Environmental Health shows, the levels of noise in living areas of the city have increased in the twelve years between the two studies, with 65 percent of them showing in 2001 average levels of noise above 75 decibels (dB), when the levels should be no more than 65 dB.

SESMA

Caquimbo and Martinez

This increase in the levels of noise, along with the lack of specific regulations to control noise in living areas, helps us to see why noise isolation is such a big issue in the housing estates of the city.

TABLE 2
Levels of Noise in Living Areas of Santiago
Comparison between 1989 and 2001 Percents of Living Areas

	1989	2001
Less than 65 dB(A)*	0.0	0.0
65–70	2.0	1.7
70–75	32.3	28.1
75–80	**57.8**	**65.8**
More than 80	7.8	4.4

Source: SESMA

*Note: 65 dB(A) is technically considered the maximum level of noise recommended for a living environment

In our case study, this forced proximity and low sonic isolation is worsened by the fact that the housing estate is always full of people. Given the low integration of women into the labor market and the relatively high levels of unemployment even during the working day, the estate is populated by women and children, older people, and unemployed male adults. These families, quite literally, live their lives with their neighbors, in almost every time and place.

As Patricia, a married 30-year-old mother of five children, told us:

> We knew that we were coming to live in a flat, but we didn't know that we would have to cohabitate with 47 more families; we are 48 in each community. If in a family group like us, we are seven, there are problems. Imagine how it will be if there are 48, everyone with very different characters.

This short statement illustrates quite clearly the problem under consideration: the relationships with strangers. This situation is not so extraordinary. In our everyday lives we continually divide our time between our intimate networks of family and friends and unknown people, especially the ones with whom we share public places such as buses, cafes, or supermarkets. In general this is not a problem for us, being part of our "normality," or the recurrent way in which we live our everyday lives.

The difference of the situation suffered by the families under study is not relations with strangers as such. What is different is that these relations are not developed in places where we normally expect to find strangers but in a situation of quasi intimacy prompted by the spatial proximity of the flats and the bad quality of the building materials. Residents, especially those on the lower floors, can always hear different noises from the surrounding environment, whether music, conversations, or the noise associated with housework or the movement of furniture. To be in one flat is always to be located on the housing estate. As Valeria, a divorced 52-year-old, who lived with her four grandchildren, told us:

> Here is different. Here is different in every sense, because being so near and too close makes everything different.…The whole world knows what you said, what you talk about, what you do.…[Here] noise is everywhere.

In the housing estate, it is impossible to forget that you have people around you because you can hear them easily almost all the time. In this sense, one of the most basic objectives of a home as space is only partially fulfilled: the isolation of its inhabitants from the surrounding natural and social environment. Through noise, neighbors can enter into each other's intimate spaces against the will of their inhabitants.

Kaika

The Noise Made by People

Of all the different kinds of outside noise that family members hear during a normal day there is one that stands out: the noise emitted by media technologies at loud volume, especially music. As Diego, a married 39-year-old father of one, told us in one of our interviews:

> Thanks to my neighbors, I spend all day listening to music. I don't need to put it on. I don't like radio that much; I don't like to listen to music … It is good that everybody has their music, but they should play it just for themselves. I've never liked that. You have to be patient, because I don't want to get upset with my neighbors; you have to know how to live and do the correct things, but I really don't like music.

This extract is representative of the general perception of the members of the families under study: noise, mainly in the form of loud music, is a constituent part of their everyday lives.

This perception is shared by the inhabitants of other housing estates in Santiago. Table 3 shows us how complaints about the loud music of the neighbors constitute the third most common complaint of the inhabitants of housing estates about their neighbors' behavior.

Something similar occurs in other urban areas of the world. For example, Grinwood and Ling analyze records of complaints about domestic noise made by inhabitants of England and Wales to local authorities in 1997/98. Comparing the records with a 1988 study on the subject, they conclude that "amplified music remains the most common noise source involved in the complaints" and that "there is a suggestion in the data that music complaints are now [1998] more preponderant in urban areas than they were in 1988."

TABLE 3
Most Frequent Complaints about Neighbors in Social Housing
Estates in the Metropolitan Area of Santiago

Problem	Frequency
Fights	68.6%
Alcoholism	67.4%
Music too loud	**51.2**%
Drugs	50.0%
People too rude	44.2%

Source: INVI

This situation is parallel to what we found in our field study. To walk through the streets and passageways of Tucapel Jimenez II, particularly on weekends, is to be immersed in a sea of noise, mainly produced by music coming from stereos and television sets located inside the homes. The management of this all-embracing and ever-present noise constitutes one of the main ways in which individuals and family groups interact with their social environment.

Paloma, for example, is a 24-year-old mother who came from the shantytown of "Las Torres" in the Borough of Pudahuel. She is quite happy with her flat. It represents a big improvement in her material living conditions. Coming from a shantytown, a recognized noisy area, could lead us to believe that she is used to living in an environment where noise is ever-present, but the situation was different.

There is a woman who since she arrived here has music on from seven in the morning. You cannot even open your windows because you hear all the music. In fact we talk to other people about how annoying it is, also for the kids. Sometimes at weekends you want to sleep a little bit later and because of her you cannot sleep, and the kids are bad tempered for the same reason. They are woken up early by the music she puts on. In fact on Friday night I had to ask the man who lives in the flat in front of us to turn down the volume because it was two in the morning and the girl couldn't sleep and I couldn't sleep. I went out and said to him if he could possibly close the door and turn down the volume a little bit, because he was sitting on the stairs with the door open and the stereo at full blast. Without the

everyday noise at night, with a little more peace, it was as if the stereo were right next to my ear.

Alejandra, a 30-year-old mother of four, felt the same way about loud music as a recurrent source of noise in the housing estate:

The music is too loud. In fact in the mornings I don't turn on my stereo because I listen to the stereos of my neighbors. I can't open the door also...we lived for six years in other flats and it wasn't like here. Sometimes they turned the music up loud, but it was a house. It is not the same living in a house as in a flat. [Here] you hear everything.

In the housing estate, noise produced by loud music is an ever-present reality that permeates everything. If the neighbors want to avoid visual contact with each other, they just have to stay behind closed doors, engaged in private practices, as many of them do. But to avoid sonic contact with neighbors is more difficult. In contrast with vision, "sound engulfs the spatial thus problematizing the relation between subject and object. Sound inhabits the subject just as the subject might be said to inhabit sound." As Paloma and Alejandra recognized, the neighbors are always present, in any home space at almost any hour, in the form of noise.

In this scenario, it seemed logical to ask who were these people, who were the noise offenders who so upset the members of the families under study. At first, we speculated that they were some sort of outsiders, people alienated from the rest of the population of the estate. From this perspective noise offenders, like any other kind of antisocial character, appeared as dysfunctional and commonly violent individuals who did not care about the needs or well being of the people surrounding them.

But the picture that we found in our research was much more complex than this simplistic stigmatization. Even though in some cases this image of noise offenders as antisocial individuals was true, in many others we couldn't find any connection between both. Many people, who in any other aspect of their everyday living in the housing estate had no problems at all with their neighbors, were identified by them as noise offenders. Even Paloma, one of our interviewees who complained the most about the noise of her neighbors, recognized at the end of one interview that:

Bull

> But don't misunderstand me, I also sometimes like to listen to
> it loud When I like the music I turn the volume up.

Therefore, we cannot say that noise offenders are a particular kind of people. The motivation behind this behavior cannot be found in some archetypical kind of personality or any other general category like gender or age. Any inhabitant of the housing estate can be, and probably has been, a noise offender to other/s at certain times. Noise is not something that some "bad" or "alienated" people do, but is a quite common and extended practice related to living in housing estates like Tucapel Jimenez II.

The Politics of Noise

The questions under consideration now are: What is the origin of such practices? Why do people produce noise knowing that it will annoy their neighbors? One possible explanation, that is going to be explored in this section, is that they do so because noise, as was recognized by Attali, appears as one of the few tools available to reconfigure the physical coordinates of their living spaces, at least partially, according to their interests and aspirations.

In order to explore this idea, we have to put our focus on the process of appropriation of local space by people during their daily lives. For the families who live in Tucapel Jimenez II, because of the recent move to live there, the process of transforming the anonymous and rationalistic space of the housing estate, not far from Le Corbusier's idea of houses as "machines for living in," into a meaningful place is in progress and in many cases just in the early stages.

The problem is that as a result of a variety of causes (low-income, dissolution of former social networks, etc.) these families appear particularly powerless in relation to the transformations of their material environment. Even though for many of them their houses appear as too small and uncomfortable, they perceive that there is nothing concrete that they can do about it. In general, there seems to be a very limited capacity to transform their living areas into the "dream home" that they had in the minds before coming to the estate.

Ureta
INVI

In this context, they have to use alternative ways to deal with and appropriate, at least symbolically, their new living spaces. One such strategy is the use of noise, especially in the form of loud music.

Manuel
Myers
Ramnarine

Stokes 1994a as quoted by Cohen

This use of certain kinds of sounds to symbolically domesticate new spaces has a long history in migrant and diaspora communities. As Sarah Cohen affirms in her study of the Jewish communities of Liverpool, "place for many migrant communities is something constructed through music with an intensity not found elsewhere in their social lives." For these groups, the use of music, not only at social events but also in terms of personal listening, commonly represents a reestablishment of the ties and foundations that form the base of their own existence as a community.

But here we are not dealing with music, but with noise. As we saw in the first section, noise is not like other kinds of sound. It is a sound producing in listeners unpleasantness ranging from discomfort to physical damage. Noise is also actively resisted by the people who perceive it. In this sense, a sound that is labeled as noise can hardly represent a community for the people who perceive it. Therefore, when studying the noises produced by the neighbors through their hi-fi equipment, we are not dealing with the sounds of a certain community that is trying to adapt to a new living space, but mostly with individuals and families who are struggling to find their place in a location that they perceive as impersonal, strange, and threatening.

In an environment in which the materials from which the houses are built do not provide enough sound insulation, noise becomes a central tool to redefine and establish the limits that materiality does not secure. For them "...sound, the ultimately liquid form, is coming to represent the physical presence of

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home territory." Through noise, neighbors can reconfigure home spaces in a personalized way in order to constitute an intimate area truly isolated from the rest of the people in the housing estate. Noise becomes a tool to build barriers that the proximity and bad quality of the building materials does not secure.

The problem is that noise not only constitutes a way to mark the boundaries of the home, but also and more critically, for all the others who have to listen to the noisemaker, noise represents a way in which the private sphere of others enters into my personal private space. This dialectic between public and private sounds and spaces is always present in the sound conflicts that characterize life in the housing estate under study, as shown in the cases of Cristobal and Ruben.

Cristobal is a married 24-year-old father of two who works as a salesman in different weekly markets in Renca and in the neighboring borough of Pudahuel. At the time of the interviews,

he was having constant problems with his next-door neighbor about noise.

When I like the music I like to listen to it loud… but in relation with the volume of the radio I respect my neighbors…for example, if I want to listen to loud music at this time, I can because I know that everyone is awake, but after 11 : 30 I can't, only with a moderate volume….[But there are neighbors who] listen to loud music and do not care about the rest like my next-door neighbor. And to avoid having problems with him, I don't tell him, "neighbor, turn down the volume"…[because] for the simple reason that they live in a flat too. He would say to me "do you know what neighbor? I'm in my flat and I can listen to what I want." They don't think that the volume bounces off the walls and you can feel it. Here you can feel it. Here nobody has respect. For example if a person is *ubicada* he respects the neighbors, but the people who are not *ubicada* don't care, do you understand? It can be four in the morning and the radio can be on outside. I can understand that he likes to listen to loud music, but not putting the speakers in the doorway. Can you imagine the sound of a 4,000 watts stereo playing?

What does it mean to be "ubicado?" A direct translation from Spanish indicates that "ubicarse" means "to lie, to be located," so someone who is "ubicado" is someone who is located in a certain place. In Chilean popular language to be "ubicado" also has a moral meaning in terms of the ability of a certain individual and group "to know how to behave properly in each situation." Someone "ubicado" is someone who behaves in each place in accordance with certain rules or sanctioned "correct" or "decent" behavior. This is the double sense of Cristobal's critique of his neighbor, his apparent lack of awareness that he is located in a particular context, both spatially (a flat in a housing estate) and timely (at 4:00 in the morning) and that there are certain rules of behavior that he must respect (not to put on loud music). As Cristobal recognizes, he also likes to listen to loud music—something that probably annoys some of his neighbors—but at certain hours that seem to him correct because everyone is awake. Therefore, his problem is not with loud music as such; it is with the lack of recognition that there are certain implicit regulations to this practice

in terms of time (different behaviors before and after 11:30) and space, as we will see in the case of Ruben.

Ruben is a married 36-year-old father of five. He works as a security worker in a supermarket in the city center. Before coming to the housing estate, he and his family used to live with his mother in a backyard accommodation. Since they moved into the estate, he has had frequent problems with one of his neighbors because of noise.

We had a problem with one of our neighbors, but it had a drastic solution: her stereo burned [laughs], it's not to be bad, but it burned, it burned, good! [laughs]. It was the only music that we listened to. Sometimes the music was good, but to hear "*andate al cerro, andate al cerro*" [go to the hill, go to the hill] and then half an hour later "*andate al cerro, andate al cerro*," and then five minutes later "*andate al cerro, andate al cerro*" [laughs], the same music everyday. You could be in the toilet or in the kitchen and you would hear it. It wasn't only me but here on the first floor everyone was annoyed. It was too much noise. It's good to listen, but to listen…we also sometimes put the music on loud, but loud for here, not to annoy people outside. It's nice [to listen] loud, but with your door closed. If you turn the music up and open the door everything goes outside…[the music from the neighbor] was very loud, sometimes at this hour was PA PA PA. If we are in, we have to speak loudly in order to hear each other. I think it's good that she listens to loud music. I listen to loud music, but I close the doors, so nobody can hear from outside, but not her. She opened the door and everyone heard. It showed a lack of respect [for the others], "I don't care, I'm in my house." Of course you are in your house, once inside the front door, "I'm in my house and I do what I want" but this is a lack of respect. She said, "I relax listening to music." That's all right, but relax quietly! It's not necessary to listen, and to the same music so loud.

In this extract, we can clearly see the second sense in which the music of the neighbors becomes noise: the lack of recognition that there are certain spaces—especially the home—where the sounds from the environment should not enter.

As we saw in the second part of the paper, given the capacity to trespass material barriers, there is no pre-fixed sonic limit of the

household. These limits have to be established through the everyday sonic practices that involve living at home. At a time when media technologies are widely available and individual capabilities to enlarge the sonic limits of the household have been expanded, the exact "place" of sonic boundaries becomes a critical everyday matter.

What Cristobal and Ruben are criticizing is not the listening to loud music as such, something that they also recognize that they do. What they are criticizing is that some neighbors, when they listen to loud music, frequently invade the private sonic space of others, not recognizing the right of every inhabitant of the estate to enjoy a space of "sonic intimacy," where they can be isolated from the noises produced in their environment. When the neighbors, after being criticized, answered that "do you know what, neighbor? I'm in my flat and I can listen to what I want" as in the case of Cristobal or "I'm in my house and I do what I want" as in the case of Ruben they are refusing to acknowledge the existence of such an intimate sonic space, reducing the space coordinates only to the material, or visible, ones where they can do "whatever they want." But the rest of the neighbors do not accept this limitation. Home space for them is not only perceived as a space of material intimacy, but also of sonic intimacy, and its violation provokes all the conflicts and tensions that we have seen in this paper.

In reaction to this sonic invasion there are several actions that neighbors develop to fight against the violation of private space by noise. Victor, for example, is a married 32-year-old father of three who works as a chef in a sandwich bar. He has to wake up quite early every day in order to get to his job, located in the city center, on time. For this reason, he used to have a lot of problems with his upstairs neighbors until he decided to fight back, starting some sort of "sonic war" with them.

> Sometimes they have a party and I don't say anything to them, what for? I also make noise in the morning. They know that when they make noise [at night] in the morning I wake up and I put on music when they are asleep.

Others prefer to take a passive or indirect approach to the problem by calling the police or going to the town hall to complain about the noisy neighbor.

Where I used to live. . .I said "hello" like any other people but nothing more. There wasn't more contact. This is my way of life to avoid problems, so it has been hard moving here, to this home, because along with the property you have to live with all the noise. It was so intense that I had to call the police, go to the Town Hall to complain because this woman put her stereo on at its highest volume. (Marta, 31 years)

In most of the cases, any practical reaction to noise goes along with two complementary perceptual processes: the discrediting of the space of the housing estate and the concomitant socialization of the problem in relation to certain kinds of people.

For example Luis was a 41-year-old married father of two who at the moment of the interviews had a relatively good income thanks to his job as a crane operator in a factory in the borough of San Bernardo. He used to live with his wife's parents on a big plot of land and for them to arrive in the housing estate and be surrounded by noise was quite a shock.

The flats are not ugly; they are beautiful. What is bad here is the people. They are common people, from shantytowns. We are not used to that. We have a lot of problems with the people upstairs. Sometimes they put the music on loud. We have quite a big stereo so I can put the music up loud too, but this is not the idea. We respect each other and then she puts the music on loud and this is not the idea. We sent the police to her many times, but you cannot understand with people like that. This is why I say that the flats are ok; the place is not ugly, but the people sometimes. . .I don't say all of them, but the majority. . .we have no contact with anybody. We have good neighbors, only *gente bien* [decent people]. Only the one upstairs who's bad inserted here [laughs], but everything else is all right.

For Luis there is a strong connection between noise and the kind of social environment in which he and his family are living. It is not that the spaces are badly isolated or that the flats are too close, but it is the people who do not know how to behave, especially the "people from the shantytown" who do not know how to live like *gente bien*. This perception was shared by other interviewees, who also came from a situation of backyard accommodation in a relative's house:

Here are only people from shantytowns. It's not that I'm a prejudiced person, but it is people of *bad living*; they put *music on very loud* sometimes. They are here and start to call screaming to each other, as if they were on a farm and using bad words and things like that (Andrea aged 40, emphasis added).

I don't like to discriminate against people but at the very beginning they were very quiet, but after eight or nine months, they relaxed and *loud music*, bad language, and fights started...I don't like the environment here; I don't like the people from the shantytown. I'm being very sincere. I don't like the people from the shantytown. At the very beginning when I arrived here, I didn't think this way, but the facts change the way you think. If you look at them and see them as clean, ordered, hard-workers, I wouldn't have a problem. I would respect them. But if I see them as thieves, dirty and shameless, [I say to them] good bye. This is the way they are, this is their reality (Ramon, aged 39, emphasis added).

Therefore, for them noise is not only something that several individuals do but is also an indicator of the belonging to a certain group, the "people from the shantytown," because, as Ramon said, "this is the way they are." Obviously people who came from shantytowns, like Cristobal or Paloma, do accept this stigmatization and expand the definition of the noise-maker as someone who lacks education or "respect" for their neighbors. When noise is seen as the characteristic of a certain social group or is seen as an indication of a lack of respect for housing residents, the space of the housing estate loses value for all its inhabitants, with the overall consequence of a significant decrease in the general quality of life.

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Beyond the particular reactions seen here, the trouble with noise at the present state of social life in the housing estate shows a much more serious problem: the weakness of their solidarities and the crisis of forms of social organization and representation characteristic of the conditions of living in housing estates in contemporary Chile. Even though noise was almost universally recognized by the inhabitants as one of the main problems of their current everyday life, at the time in which this fieldwork was conducted, no measures had been taken to act against noise at a communal level, such as the development of certain regulations to

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control or ban certain kinds of noises in the community. As we have seen in this section, most of the reactions against noise were individual and the possibility of acting together against noise was not even mentioned in any of the interviews conducted. In the current situation beyond the physical space of the house, there is no common recognition or consensus of any other boundary to limit your own space. For some, these limits are given by the recognition of the rights of everyone to enjoy certain sonic intimacy, that lies behind concepts such as to be *ubicado* or respectful, but these meanings are not accepted or shared by everyone.

Conclusions

As we have seen throughout this paper, noise is one of the main contributing factors to the low degrees of satisfaction with the quality of life in social housing estates in Chile. Given the fact that an important number of low-income urban population of the country lives in one of these housing solutions, we can even say that the condition of poverty in contemporary Chile is characterized by the growing presence of noise and its negative consequences both in terms of health and quality of life.

In this context, to act against noise appears as one of the crucial ways in which the conditions of life of these populations can be improved at the quotidian level. As seen here, the problem with noise has two main causes, one material and the other social: the low quality of the building materials and proximity of the flats and the low levels of social integration among its inhabitants. If we want to develop policies that successfully tackle noise, they should be focused on both sides of the problem, as recognized by Jiron and Fadda.

On the one hand, in relation with the material side of the problem, the regulations regarding housing estates should explicitly take noise isolation as one of the factors to consider in relation with the construction of new housing estates. In practical terms, this consideration should materialize in less concentrated estates both in terms of the total number of buildings and flats per estate and in relation with the number of flats per building. Also the quality of the building materials should be supervised and controlled in order to warrant a minimum level of sound isolation between each flat and its environment.

On the other hand, in relation with the social side of the problem, local authorities and neighborhood associations should

take specific measures to control noise offenders in housing estates. At first, neighborhood associations, with the help of public actors, should try to agree on certain rules regarding the definition of noise episodes (in terms of source, intensity, hour of the day, etc.) and mechanisms to control them. Along with this internal arrangement, especially if it is not successful to control noise, local authorities should develop campaigns to make clear that noise is a serious offense against neighbors and devise effective ways to deal with noise offenders when this offence occur. This last sort of action is especially important in socially-mixed housing estates like Tucapel Jimenez II where the weak social ties between the neighbors make it quite difficult for them to agree in effective internal regulations against noise.

To sum up, noise-related problems are one of the central areas of conflict in which the differences and tensions between the neighbors of social housing estates materialized on a daily basis. At the same time its potential resolution (or at least its control) appears as one of the key measures that could significantly improve the quality of life in housing estates throughout the country. Explicit policies and actions have to be made in order to advance in this direction.

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