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A theoretical and empirical analysis of context: neighbourhoods, smoking and youth

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Abstract

Numerous studies are currently addressing the issue of contextual effects on health and disease outcomes. The majority of these studies fall short of providing a theoretical basis with which to explain what context is and how it affects individual disease outcomes. We propose a theoretical model, entitled collective lifestyles, which brings together three concepts from practice theory: social structure, social practices and agency. We do so in an attempt to move away from both behavioural and structural-functionalist explanations of the differential distribution of disease outcomes among areas by including a contextualisation of health behaviours that considers their meaning. We test the framework using the empirical example of smoking and pre-adolescents in 32 communities across Québec, Canada. Social structure is operationalised as characteristics and resources; characteristics are the socio-economic aggregate characteristics of individuals culled from the 1996 Canadian Census, and resources are what regulates and transforms smoking practices. Information about social practices was collected in focus groups with pre-adolescents from four of the participating communities. Using zero-order and partial correlations we find that a portrait of communities emerges. Where there is a high proportion of more socio-economically advantaged people, resources tend to be more smoking discouraging, with the opposite being true for disadvantaged communities. Upon analysis of the focus group material, however, we find that the social practices in communities do not necessarily reflect the “objectified” measures of social structure. We suggest that a different conceptualisation of accessibility and lifestyle in contextual studies may enable us to improve our grasp on how differential rates of disease come about in local areas. © 2002 Elsevier Science Ltd. All rights reserved.

Keywords: Lifestyle; Context; Smoking; Neighbourhood; Youth; Canada

Introduction

It was well over 10 years ago that Haan, Kaplan, and Camacho (1987) reported their results from the Alameda County study supporting the hypothesis that properties of the socio-physical environment may be important contributors to the association between low socio-economic status (SES) and excess mortality. Later

studies have also confirmed that the type of local neighbourhood is associated more strongly with perceived health than the larger region in which the neighbourhood is located (Blaxter, 1990). Dramatic industrial restructuring and neighbourhood decline has also spawned increased concern for the measurement of community context (Coulton, Korbin, & Su 1996) in relation to disease outcomes. These studies converge to suggest that it may be fruitful to examine features of local areas that are potentially health damaging.

Since the publication of these important studies much attention has turned to the study of contexts as determinants of ill-health (Duncan, Jones, & Moon, 1993, 1996, 1998, 1999; Macintyre, Maciver, & Sooman,

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1993; Sooman & Macintyre, 1995; Ellaway & Macintyre, 1996; Macintyre & Ellaway, 1998; Popay, Williams, Thomas, & Gatrell, 1998). There remain, however, some fundamental problems with the notion of context. What is it? How do we know what context is? How do we theorise this concept and how can we operationalise it? The general aims of this paper are to highlight some of these problems, to suggest a theoretical model with which these issues can be addressed, and then to demonstrate empirically how the theoretical model can be examined.

Context studies as we know them today

For the most part current context studies tend to conceive of context in four ways: (1) as the defined area within which we capture variation by analysing the aggregate characteristics of individuals that happen to live there; (2) as a location for particular environmental factors that influence disease outcomes; (3) as a location for community-level resources such as parks, stores, etc. or (4) as a location for social capital (Kawachi, Kennedy, Lochner, & Prothrow-Stith, 1997; Kawachi, Kennedy, & Glass, 1999; Kawachi & Berkman, 2000). Essentially, most of these studies view areas as being mediators of the social determinants of health, and thus, use areas as vehicles for exploring hypotheses about the role of material deprivation, physical exposures or social capital, in the etiology of ill health (Macintyre et al., 1993). In so doing these context studies make two assumptions: that the distribution of people's individual characteristics within contexts influences disease rates (that is, similar types of people will have similar types of disease experiences wherever they live), or that the disease experience of particular types of individuals depends primarily on the attributes of the area, so that similar types of people have different disease status from one place to another (Shouls, Congdon, & Curtis, 1996).

These context studies have been tremendously useful in pushing forward a comprehension of the role of local environments on health outcomes, but have largely missed an important theoretical component, a component that is gaining increasing recognition in both the social sciences and from within public health itself (particularly in relation to health behaviours). While it is critical to be able to describe physical, material and psycho-social features of areas, it is also key to capture the meaning that people ascribe to their local neighbourhoods, its resources and people's actions. As such, increasing research concerned with the effect of the social environment on health is delving into the embeddedness of our actions and the meaning that we attribute to our behaviour (and that of others in our proximal environments), as potential venues for explanation and policy (Daykin, 1993; Pavis, Cunningham-

Burley, & Amos, 1997, 1998; Popay et al., 1998). This has been deemed important as the meaning that we ascribe to health and health behaviours influences our actions (Poland, 1992). To study the social contextuality of meaning, we require research techniques that situate health-related behaviours within the context of the social relations and transactions of people's lives by tapping their subjective experience within their social location (Pavis et al., 1997, 1998). So, for instance, research into smoking has focused on the meaning of smoking for women in dealing with the tensions produced by the external forces of gender inequality, class inequality and poverty (Daykin, 1993; Graham, 1987, 1994).

Not only is this a methodological issue requiring qualitative methods, but it is also a theoretical one in which the relationship between health-related behaviours, risk and knowledge can be analysed in terms of the intersection of structure (norms, codes of conduct and institutions) and human agency (individual volition, action) (Poland, 1992). An avenue that may assist us in understanding how context influences disease outcomes is practice theory,¹ that is, the theory of the relationship between the social structures of society on the one hand, and the nature of human action of the other (Ortner, 1989). To produce a richer framework for understanding the relationship between agency, structure and health behaviours we have chosen to explore 'place' as the location within which social structure impacts on people's lives. We then consider how place, conceptualised in this way, is understood by people in their day-to-day activities (Popay et al., 1998). Attention to the meaning people attach to the experience of place and health-related behaviour could help us understand what context is and how it might be related to disease outcomes.

Guided by practice theory then, we examine a potential mechanism through which area of residence might influence ill-health using the example of smoking and pre-adolescents. As an initial exploration of place, we begin by examining more traditional measures of context, such as aggregate SES and neighbourhood resources, the hypothesis being that they are highly correlated; the more advantaged the neighbourhood the more smoking-impeding resources there will be. In turn we use pre-adolescents' narratives to explore the meaning of smoking within their contexts. We evaluate the

¹The term practice theory is used here, rather than the oft cited structuration theory of Anthony Giddens, given that within the social sciences generally the theoretical study of the relationship between structure and agency has been termed practice theory (*théorie de la pratique*) by important thinkers in the field such as Pierre Bourdieu. Ortner provides for a particularly enlightening discussion of practice theory.

relationship between structure and agency through the pre-adolescents' descriptions of people's social practices in relation to smoking. The hypothesis is that the social practices will elucidate the relationship between the rules and resources and people's agency in each neighbourhood and that this relationship will differ based on local particularities.

The theoretical framework: collective lifestyles

Three major aspects of social theory enable a greater articulation of context's components: social structure, social practices and agency. The first component, the social structure, is defined as the factors involving individuals' relationships to each other and the attendant power relations. The structuration theory of Giddens (1984) explores structure as the rules and resources produced and reproduced by agents in their everyday activities. "Rules relate on the one hand to the constitution of meaning, and on the other to the sanctioning of modes of social conduct" (Giddens, 1984 p.18). Resources on the other hand, "...refer to the modes whereby transformative relations are actually incorporated into the production and reproduction of social practices" (Giddens, 1984, p. 18). Rules and resources include positions occupied within the social and economic structures of society, such as race, SES, gender, etc. (Link & Phelan, 1995). We purport that rules and resources should not be seen as external, inert materials possessed by individuals, but as a part of a process or set of relations. Rules and resources can enable and constrain and are differentially distributed (Calnan, 1994). It is through the utilisation of rules and the access to resources that power relations are enforced and reinforced. However, using the methods that are normally employed in studies of context we generally cannot infer how these rules and resources manifest themselves or how they are employed by populations. We may know, for instance, the number of certain types of resources that exist within a given area, but we cannot know how these resources are used and even if they are accessed at all.

The social structure is not directly observable as it is but the objectification of a system of meaning. While well aware that there are numerous ways in which structure may be conceptualised, we choose to operationalise some aspects of structure in this paper using a few commonly used indicators of structure. First, we employ aggregate characteristics of individuals, which in most of the literature on context include indicators of SES such as income, deprivation or inequality indices, percent in poverty, etc. (Duncan et al., 1993, 1996, 1998, 1999; Soobader & LeClere, 1999; Diez-Roux, Link, & Northridge, 2000). These we have entitled characteristics.

Second, other instantiations of the social structure are what we entitle social "agents" and "resources".² This operationalisation of the social structure is inspired by the work of several researchers including Cheadle, Wagner, Koepsell, Kristal, and Patrick (1992), and Cheadle, Sterling, Schmid, and Fawcett (2000) who studied context by emphasising "community-level indicators" as well as Macintyre's work on supra-individual variables, or opportunity structures (Macintyre et al., 1993; Sooman & Macintyre, 1995; Ellaway & Macintyre, 1996; Macintyre & Ellaway, 1998), indicators that measure aspects of the physical, legal, social and economic environments in a community. Given that our empirical interest is smoking and pre-adolescents, social "agents" are defined as established collective entities who by their actions permit the regulation or transformation of smoking. So, for instance, a store selling cigarettes is considered an agent. The influence of these smoking-related social agents on people is exerted through the provision of symbolic/material "resources" that either promote or impede smoking. Resources are that which qualify agents and permit the regulation or transformation of smoking. Cigarettes sales are thus considered a resource as is a non-smoking zone.

As with all concepts that characterise the social structure, the meaning ascribed to these concepts is best grasped by analysing people's social practices—their actions. We define social practices as the reflexive activities that actors engage in that make and transform the world. Anthony Giddens adds to his structuration theory the notion of "practical consciousness", individuals' tacit understandings of the "goings on" in the context of social life. Structure has no existence outside of the knowledge that agents have regarding their daily activities. This is embodied, for Giddens, in his notion of routinisation, the everyday activities that are continually being produced and reproduced. Routine, he argues, is integral both to the continuity of the personality of the agent, as well as to the institutions of society. The routinised activities do not just happen, but are "made to happen" by the habitual model of reflexive monitoring of action which individuals sustain in circumstances and co-presence (Giddens, 1984, p. 64). We therefore operationalise social practices as the routinised activities of people as related by the pre-adolescents. Within the literature on smoking an

²While the term resources most commonly connotes a positive object, particularly in reference to health resources, we opt to define resources as being potentially bidirectional, that is, some resources may be smoking encouraging while others may be smoking discouraging. It will be argued that what may seem, a priori, to be a smoking encouraging resource may in some contexts be viewed by social actors as smoking-discouraging, depending on the local meaning attached to the resource.

example of routinisation might be places that people accept as smoking spots, moments during the day when people smoke, etc.

The final key concept in this framework is agency. Agency is defined as the ability for people to deploy a range of causal powers; to “make a difference to a pre-existing state of affairs or course of events” (Giddens, 1984, p. 14). Agency concerns events of which the individual is the perpetrator. Intrinsic to agency is power, as agency is the ability to produce an effect, and thus, to exert power. Furthermore, practice is inextricably linked to agency for even in circumstances where it appears that people have “no choice” they still have agency.

We developed a heuristic tool entitled collective lifestyles (Frohlich, Corin, & Potvin, in press) which brings together notions of social structure, social practices and agency to explain how health outcomes may come to be differentially distributed. The biomedical treatment of lifestyle tends to view it as discrete and specific behaviours (such as smoking or physical activity) that influence disease outcomes (Dean, 1988). Behaviour viewed in this way is stripped of most of the meaning ascribed to it, whereas the analysis of “behaviours” as social practices situates the behaviour in its social context (Daykin, 1993). We therefore define collective lifestyles as not just the behaviours that people engage in, but rather, as the relationship between the social structure and social practices (Frohlich & Potvin, 1999). As such, the act of smoking (frequently termed a behaviour) is re-conceptualised here as a social practice, one among other social practices in relation to smoking. Williams (1995) has similarly favoured a conceptualisation of “behaviours” as “part and parcel of this implicit, routinised, practical logic of daily life” (Williams, 1995, p. 598). We furthermore consider that smoking practices are not simply viewed as reactions to the social structure, but as both a re-creation and reaction to the rules and resources that are structured by and structuring people in their everyday activities (Popay et al., 1998). As such, collective lifestyles comprise both structure and practices. Lastly, we do not consider action to be solely constrained by the structure but as transformative. The power to transform structure through practices will be analysed in terms of agency.

Neighbourhood smoking as a reflection of collective lifestyles

In order to direct attention to the role of collective lifestyles in the production of ill-health, delimiting areas significantly focuses the task. One area in which we can examine this relationship is the neighbourhood given that neighbourhoods are where individuals encounter social structure, live out life courses, and interchange

with many of the people having profound influence on their life choices (Bartley, Blane, & Davey Smith, 1998). Using neighbourhood as the unit of analysis we can ask ourselves how people make sense of and act upon their environments with regard to their health and, furthermore, what is the relationship between material risk, individual experience and action at the individual and collective levels (Popay et al., 1998).

By focusing on neighbourhoods as the nexus of collective lifestyles we will also be emphasising the importance of the micro-contexts of social life. It should be made clear that collective lifestyles are a local manifestation and mediation of societal and personal processes. These local settings are not just simply reflective of macro-level socio-economic and political forces but also rework these forces to varying degrees (Kleinman, 1995). Each neighbourhood is influenced by larger societal forces while the materialisation of these influences will differ based on local particularities. In this way, the focus on local areas does not disregard, in any way, broader societal forces such as those associated with the more general division of power in society such as gender, class and race relations (Lynch, Due, Muntaner, & Davey Smith, 2000). Collective lifestyles can thus be viewed as local ways of being which work through individual and collective involvement in local rules, resources and practices.

Research design and methods

The study and neighbourhoods

The study results presented here are part of a project examining how community characteristics are associated with families' and children's health behaviours (cigarette smoking, physical activity and fat consumption). More specifically, the objective of this project was to develop a methodology to characterise neighbourhoods in order to understand the links between community characteristics and individual ill-health outcomes.

While this particular study examines smoking practices, and not disease outcomes, per se, an amassing body of literature exists suggesting that while not all adolescents who experiment with smoking will go on to become addicted, experimentation is a necessary step and is a key marker of eventual smoking uptake (Choi, Pierce, Gilpin, Farkar, & Berry, 1997; Jackson, Henriksen, Dickinson, Messer, & Bridges Robertson, 1998). Furthermore, earlier initiation of smoking is associated with developing heavier use and earlier onset of related illnesses (Dovell, Mowat, Dorland, & Lam, 1998). Given that this is the case, studies of social practices such as smoking, may have an important bearing on our understanding of the mechanisms that bring about differential disease rates in areas.

A cohort of families was assembled in 1995 based on the selection of a fourth grade index child (normally aged 9/10) in 47 participant elementary schools in municipalities across the province of Québec, Canada (Potvin, Gauvin, & Nguyen, 1997). These same youth were questioned again in 1997, when in the sixth grade (average age 11/12), as were their classmates who were not participants in the original cohort. Smoking status was assessed at this time by their response to the following question, “Have you ever smoked a cigarette, even just a puff?”. All youth who responded with one of the following options were deemed “initiated to smoking”: “Yes, 1 or 2 times”; “Yes, 3 to 10 times”; or “Yes, more than 10 times”. Otherwise, the pre-adolescents maintain their “uninitiated to smoking” status. Representation from a remote part of Quebec, a sub-urban area and an urban area was ensured. Given our interest in characterising the different neighbourhoods, we began by clustering families based on the postal codes provided by pre-adolescents’ parents in a separate questionnaire. For the most part the participating children in this study lived in the same neighbourhood as their school. If not, the family data were excluded. Using these geographic co-ordinates, we mapped them out and then traced a perimeter as a function of the “life” of the community, that is a 10–15 min displacement time by foot from the elementary school. The displacement restriction was felt to represent the average area that pre-adolescents would cover in most of their daily activities within their neighbourhood. By following this procedure we constructed 32 territories:³ 13 in an urban area; five in suburban areas and 14 in remote areas. Two final adjustments to the territories’ boundaries were made first by extending the perimeters to natural barriers such as large green spaces, large boulevards, railway lines and municipal limits.⁴ Second we attempted to align the final boundaries to fit as closely as possible with the Canadian census tract limits (for the sub-urban and urban areas) and for enumeration areas in the remote areas.

³The term “territories” is used throughout the rest of this paper when referring to communities or neighbourhoods. The concept of “territories” is deemed more appropriate given that it refers both to urban and sub-urban neighbourhoods as well as villages in remote areas. Furthermore, they were derived empirically and therefore may not always correspond to our study subjects’ perceived communities or neighbourhood.

⁴To increase the empirical validity of the meaningfulness of these final boundaries, a sample of urban and suburban territories were walked through by the authors with boundaries assessed through observation. When possible, local people were also asked to validate the boundaries of what they perceive to be their territory. In the remote areas the limits of the villages were considered the “natural” borders.

Components of the framework

Agents and resources

Given that the population of interest in this research was pre-adolescents, we chose to collect resource information regarding how conducive the immediate environment is towards smoking for youth. With this in mind, we chose seven resource variables, two of which encourage smoking and five of which discourage smoking. The former include whether agents: permit smoking on their premises (*permit*) and sell smoking-related products (*sale*). The latter include whether agents: forbid smoking on their premises (*forbid*); inform people about anti-smoking products or about the hazards of smoking (*inform*); have signs banning smoking on their premises as required by the Provincial law (*signs-ban*); have signs indicating that they do not sell to minors (*signs-minors*) and have a person responsible for the surveillance of smoking within the agent (*surveillance*).

All the resource variables represent the proportion of agents in a territory that provide the given resource. To collect these data, an exhaustive list of agents that could potentially be involved in the reproduction of smoking in the 32 territories was drawn up based on lists of public institutions, community organisations and private businesses provided by municipal administrations. Brief telephone interviews were conducted with each agent during which we asked whether they offered products, services or information concerning tobacco and smoking. Having established a comprehensive list of all agents involved in the regulation of smoking in the 32 territories, we created groupings of agents for sampling purposes based on their hypothesised relationship to the reproduction of smoking.⁵ For each of the territories we randomly sampled up to three agents for each of these groupings present in the territories. A consequence of this sampling strategy is that, in theory, the sampling proportion for any given agent category varies across territories. Because the corner/grocery store category is the most common, and varies remarkably across the territories (that is, some territories had but one and some had many), this is the category most affected by this sampling issue. In order to reduce the bias introduced by this sampling scheme, the denominator for each of the resource variables was derived using only relevant agent categories (see Appendix A for a listing of the agent categories used as the denominator for each resource).

Three trained research assistants, with the aid of an observation grid, visited the agents in 1999 to evaluate

⁵We created 14 groupings: hotels, tobacconists, health organisations, schools, municipal services, leisure centres, sports associations, leisure associations, sports centres, sports stores, corner/grocery stores, heart health committees and pharmacies.

the presence or absence of each of the smoking-related resources. With the exception of *signs-minors* and *sales*, assessed using observation only, resources were evaluated through both interviews and observation.

Characteristics

1996 Canadian census data were requested from Statistics Canada for each of the 32 territories. Two variables used as indicators of SES were chosen based on past research in which they were found to be powerful predictors of health-related outcomes (Frohlich & Mustard, 1996): the proportion of unemployed persons aged 15–24 (*unemployment*) and the percentage of single-parent female households (*single-mom*). Given the frequent utilisation of income and education as indicators of SES, median household revenue (*income*), as well as the percentage of people with a university education (*education*), were also examined.

Social practices

Focus groups were conducted in the spring of 1999 with pre-adolescents from eight of the territories under study.⁶ The territories chosen for the focus groups were selected based on extreme values for two sets of variables: the prevalence of smoking initiation among grade six students in the territory, as reported in the 1997 questionnaire, and the SES of the territory (estimated by comparing the unemployment rate and median household revenue for each territory). Results are given from the focus groups of only four of these territories given space limitations.

The principals and teachers from each of the selected territories were contacted. Only one school refused to participate. The teachers were then requested to choose two sets of six youth: one set of which they suspected had begun experimenting with smoking and the other group for whom the teacher believed the youths had not yet begun to smoke. The groups were comprised of boys and girls with a heterogeneity requested within each group (loners, groups of friends, etc.).⁷ A consent form was sent to the homes of each of the selected pre-adolescents. At this stage there was a 100% participation rate.

The focus groups all took place at the school during school hours. The discussion was tape-recorded with permission from the youths. The focus groups ranged in length from 35 to 75 min. Each focus group began with a

general discussion about the territory. This was followed by an exercise which served to centre the discussion that followed. Each pre-adolescent was requested to draw his/her neighbourhood paying particular attention to the parts of the neighbourhood where people spend their time (see Fig. 1 for an example of the drawings). The remaining part of the focus group was structured around several themes: the settings in which people smoke, the role of peers in smoking, the meaning of smoking in the territory and the accessibility of smoking. By discussing the smoking habits of all members of the territory these questions sought to evaluate the general significance of smoking in the territories. The interviews were then transcribed verbatim.

Analyses

All data regarding both characteristics and resources were entered and analysed using the Statistical Package for Social Sciences for Windows Version 9 (SPSS/Windows). Given the relatively small number of territories zero order and partial correlations were used to examine whether context is the reflection of both resources and characteristics of the territories.⁸ The partial correlations were conducted to control for the effect of SES on the resource variable correlations.

The focus group materials were analysed through the lens of the collective lifestyles framework developed in the earlier part of this paper. Stories were created for each of the four territories by searching for the following themes: the smoking-related routinised activities of people in the territories; the ways in which people were described to use smoking resources as a medium through which to express power; how smoking practices are related to constraints and opportunities in the territories and how capable people are perceived to be to deploy smoking resources.

After highlighting the pertinent materials from the focus groups, both the quantitative and qualitative data were analysed together in an iterative process to give meaning to the quantitative data and to situate the qualitative data in a larger context.

Results

Tobacco-related structural properties of the territories

Resources

Table 1 gives the distribution across the 32 territories of the variables examined in this study and highlights the

⁶It was deemed unnecessary to conduct focus groups in all 32 of the territories as the focus groups are used to illustrate the importance of examining social practices, not as a way of confirming any hypotheses regarding our study population.

⁷We strove for heterogeneity in the groups to try to achieve as complete a picture as possible of each territory's social practices with the assumption being that gender and peer group affiliation may influence perceptions of smoking practices.

⁸Given the relatively small number of territories we were restricted to the use of correlational analyses rather than more sophisticated statistical techniques such as multivariate regression analyses.

Table 1
Descriptive statistics for the 32 territories

Variable	<i>n</i>	Focus group territories
Type of area		
Urban	13	Dubos
Sub-urban	5	Ellenburg
Remote	14	Aurelius, Steinback
Population		
465–999	5	Aurelius
1000–4999	10	Steinback
5000–10,999	10	Dubos, Ellenburg
20,000–29,999	7	
Median income (\$)		
Less than 19,999	3	
20,000–24,999	10	Dubos
25,000–29,999	7	Steinback
30,000–39,999	7	Aurelius
40,000–53,732	5	Ellenburg
% Unemployed youth (15–24)		
0.0–0.9	3	
1.0–19.9	8	Dubos, Ellenburg, Aurelius
20.0–29.9	15	Steinback
30.0–43.0	6	
% With some university		
0.0–8.0	9	Steinback
8.5–15.0	8	Dubos, Aurelius
15.1–30.0	9	Ellenburg
30.1–50.0	6	
% Single-parent female-led families		
4.0–10.0	7	Aurelius
10.1–15.0	12	Ellenburg
15.1–25.0	8	Dubos
25.1–40.0	5	
% Agents setting smoking products		
0.0–30.0	8	Ellenburg
30.1–40.0	10	Dubos
40.1–50.0	8	
50.1–71.0	6	Aurelius, Steinback
% Agents with active surveillance		
0–19.9	8	
20.0–29.9	12	Ellenburg, Aurelius
30.0–49.9	6	Dubos
50.0–100	6	Steinback
% Agents with information discouraging smoking		
0.0–15.9	8	
16.0–19.9	9	Ellenburg, Steinback
20.0–24.9	10	Dubos, Aurelius
25.0–33.0	5	
% Agents who permit smoking		
0.0–19.9	4	
20.0–29.9	6	

Table 1 (continued)

Variable	<i>n</i>	Focus group territories
30.0–49.9	10	Ellenburg, Aurelius
50.0–69.9	8	Dubos, Steinback
70.0–78.0	4	
% Agents who restrict smoking		
0.0–49.9	3	
50.0–69.9	12	Steinback
70.0–79.9	10	Dubos, Aurelius
80.0–100	7	Ellenburg
% Agents with no-smoking signs		
0.0–19.9	6	Aurelius
20.0–29.9	9	Steinback
30.0–39.9	10	Dubos
40.0–60.0	7	Ellenburg
% Agents indicating no-sales to minors		
0.0–19.9	8	Dubos
20.0–34.9	11	Aurelius, Steinback
35.0–54.9	4	Ellenburg
55.0+	9	
% Youth initiated to smoking by 6th grade		
0.0–19.9	5	
20.0–29.9	11	Dubos, Ellenburg, Aurelius
30.0–39.9	4	
40.0–49.9	6	Steinback
50.0+	6	

Table 2

Pearson correlation coefficients for resources and characteristics in the 32 territories

Variable	Permit	Sale	Forbid	Inform	Signs-ban	Signs-minors	Surveillance	Unemployment	Single-mom	Education	Income
Permit	—										
Sale	0.72 ^a										
Forbid	−0.80 ^a	−0.64 ^a	—								
Inform	−0.24	−0.17	0.35 ^a	—							
Signs-ban	−0.52 ^a	−0.60 ^a	0.46 ^a	−0.04	—						
Signs-minors	−0.12	0.05	0.30	0.08	−0.01	—					
Surveillance	−0.25	0.12	0.15	0.43 ^a	0.18	0.23	—				
Unemployment	−0.37 ^a	−0.31	0.49 ^a	0.40 ^a	0.15	0.11	0.38 ^a	—			
Single-mom	−0.40 ^a	−0.45 ^a	0.26	−0.16	0.42 ^a	−0.46 ^a	−0.16	0.29	—		
Education	−0.39 ^a	−0.46 ^a	0.19	−0.03	0.31	−0.34	−0.26	0.07	0.52 ^a	—	
Income	0.00	−0.10	0.03	−0.15	−0.16	0.50 ^a	−0.14	−0.31	−0.50	−0.22	—

^a $p < 0.05$.

socio-economically advantaged people as well as large proportions of smoking-discouraging resources. Both of these instantiations of the social structure go in the direction that one might have suspected from past literature. The results in relation to *single-moms* and *unemployment* are both surprising, however. In most

research female single-parent status is associated with low SES. In our territories, however, there is a significant correlation between the proportion of female single parents and the proportion of those having a university education ($r = 0.52$). This correlation is most striking in the urban and remote territories.

The partial correlations are useful to highlight the relationship between characteristics and resources at the territorial level. *Education* was partialled out as it is the SES variable most correlated with the resources and for which we have the most power of explanation. These analyses reinforce the earlier zero-order correlations in that pairs of smoking discouraging resources tend to be more present when either a territory has higher proportions of university educated people or a higher proportion of single, female-led households.

In the partial correlations the positive relationship between the proportion of agents that permit smoking in a territory and the proportion of agents that sell cigarettes is diminished when education is controlled for (with the r going down from 0.72 to 0.67). The proportion of university educated people in a territory also increases the relationship between the proportion of agents that have no-smoking signs and the proportion of agents that permit smoking (r changing from -0.52 to -0.46). Partialing out education thus leads to an attenuation of the relationship between resources, thus suggesting that the pattern of resources in a territory is in part a function of the education levels of its population. This same attenuation is witnessed between these two resource variables where there are large proportions of single-parent female-led households, in this case r changing from -0.52 to -0.42. Lastly, the relationship between the proportion of no-smoking signs found in a territory and the proportion of agents that sell smoking-related materials is attenuated by both the proportion of university educated people in a territory as well as the proportion of single, female-led households ($r = -0.60$ changing to -0.54 and -0.51 respectively), again suggesting that these characteristics are related to the proportion of smoking-discouraging messages being emitted by agents in a territory.

Of the 32 neighbourhoods in our study, there were strong correlations between the proportion of socio-economically advantaged people in a territory (as measured by education) and the proportion of smoking-discouraging resources. While it is surprising that the variable for single-mother status was also significantly correlated with the proportion of smoking-discouraging resources, this is partly comprehensible given that there was a strong correlation between the proportion of single mothers and those with a university education. It is, however, much more difficult to understand the relationship with unemployment. If we consider education and single parenting alone, however, there is a tendency in the collective lifestyles of the territories in terms of our operationalisation of the social structure.

This is a purely structural analysis, however. If we were to complete the research process at this point, it would be tempting to conclude that more advantaged

territories tend to have more smoking-discouraging resources and therefore, probably have a lower rate of smoking initiation amongst their pre-adolescents. Further studies would then regress smoking initiation rates on these structural variables. In so doing, however, we would completely bypass the transactional process between the social structure, as defined here, and the meaning that individuals in these territories give to the structure. If we maintained a more deterministic perspective, we would expect that people's practices would directly reflect the information culled from the inventory of community resources, such that communities with more smoking-discouraging resources would have less smoking generally and demonstrate practices that were generally anti-smoking. As we will see, however, this is not necessarily the case.

Tobacco-related practices and agency in selected territories

*Steinback*⁹

Steinback was originally chosen for this study because of the grade six youths in this territory participating in the study, 48% had already been initiated to smoking, the unemployment rate for people aged 15–24 was very high at 29% and the median household income low at \$26,478. It is situated in a remote area. In 1996, the village of Steinback had a total population of 1660 people.

In the focus groups the youths reported that pre-adolescents and adolescents have a complicit relationship with respect to smoking; the older adolescents encourage, and often initiate the younger ones to smoking. The older ones also help buy cigarettes for the younger ones. According to the youths, there is also a local store that sells cigarettes to anyone regardless of age. There is no stigma attached to smoking, smokers are perceived to be normal. Furthermore, adolescents walk openly in town with cigarettes in their hands. There is a general tolerance and lack of surveillance regarding smoking in the village and smoking is not viewed to be a "marginal" activity.

Pre-adolescents report that they can smoke in public places without being disturbed, as evidenced by the local practices of youth. The quantitative data reinforce this given that Steinback has the highest proportion of agents that permit smoking on their premises (55%) of the four territories under study. There is a bowling alley attached to the local bar where youths are under no surveillance. They often frequent this spot to smoke. Young people smoke nearly everywhere. In fact, there is even a special place dedicated to smoking in the village called the "wall".

⁹The names of the territories are all pseudonyms.

Interviewer: Where do the adolescents go to smoke in the village?

Respondent: Up there, behind the church, there is a big cement block (the “wall”). They sit and they smoke there. Everybody goes there.

The respondents further reported that they are not allowed to smoke in and around the primary school. The quantitative data also reveal that there is quite a lot of surveillance amongst the agents that were part of our sample (50%). What transpires, however, is that the moment youth enter junior high school (age 12–13), there is no longer any surveillance of pre-adolescents’ smoking on the school grounds (the primary and junior high school are adjacent to one another). According to the respondents interviewed, most people begin to smoke seriously at school around this age during the breaks between classes. Indeed they voiced a fatalism with reference to their future abilities to refrain from smoking once they began secondary school.

Interviewer: Do you think that it will be difficult for you to not become a smoker?

Respondent 1: Yes, because most of the kids smoke in secondary school. Next year we will be there.

Respondent 2: Last year lots of kids said, “Me, I will never smoke”, and they got to secondary school and now they smoke.

The choices structured by the situation that youth find themselves in are limited. There is an expectation that once one moves from one school to another one will smoke. This fatalism is echoed by the respondent’s elaboration of their belief that adults are incapable of influencing or stopping their children’s smoking habits as there are simply too many youth who smoke and therefore any attempt to ban smoking is too monumental a task.

Interviewer: What do the adults do about the youth your age who smoke?

Respondent: They don’t have much choice but to accept it. If they decided to try to stop them, they would have a lot to stop since there are a whole lot who smoke.

Ellenburg

Ellenburg is a relatively wealthy suburb of Montreal with a median household revenue of \$53,732 and a low unemployment rate for those 15–24 years old at 10%. Its population in 1996 was 13,905. The population is largely comprised of young families. Ellenburg’s pre-adolescent respondents to our questionnaire in 1997 were initiated to smoking in relatively low numbers (20%).

Interestingly, the moment we began to speak of smoking in their territory the respondents from the focus groups in Ellenburg began to describe the use of illegal drugs, citing marijuana as well as heroine. Along with a discussion regarding drug use and smoking, the youths also spoke of adolescent gangs, gangs who terrorise the territory with violence, graffiti and drug selling. Indeed they went so far as to suggest that these gangs have a total reign on the territory.

Interviewer: Do the adults allow adolescents to smoke?

Respondent 1: Well, its mostly the adolescents who have the control.

Respondent 2: Since its legal, say a dad leaves his house, and there’s a gang of youth smoking in front of his house. He says “Get out of here”. They will come back with their gang and they’ll get him.

Interviewer: So the gangs who smoke make people afraid in the neighbourhood?

Respondent: Often they take drugs, so they’re stoned and they don’t know what they are doing. They attack you without any reason.

It is not surprising, then, that according to the interview material the adolescents are not at all bothered if seen smoking. Adults would not intervene anyway given that they could be physically attacked by the teens if they attempted to intercede in someone’s smoking. Generally the respondents feel that adults in the territory do not know how to handle teens and particularly the situation with the gangs.

To procure cigarettes the respondents are aware of a black market of sorts that exists in what they call “basement stores”. These stores sell cigarettes to anyone, regardless of age.

Interviewer: Are there many places to buy cigarettes in your neighbourhood?

Respondent 1: There is a basement store.

Respondent 2: They are all hidden in houses. Or in basements.

Interviewer: Is it less controlled in these places? Is it much easier to buy cigarettes there?

Respondent: Its more dangerous sometimes. Because sometimes they sell cigarettes that are not well-known brands. Sometimes they even make the cigarettes themselves

Youth therefore find it easy to obtain cigarettes if they desire. The respondents also mentioned that the adolescents help the younger children get cigarettes from the legitimate sources. So, despite the resource information gathered, which paints a portrait of an

anti-smoking territory, with only 27% of the agents inventoried selling smoking-related paraphernalia, 82% of the agents inventoried forbidding smoking on their premises, 44% of agents showing no-smoking signs, and an important percentage of agents who display signs indicating that they do not sell to minors (50%), youths are able to obtain cigarettes in circuitous ways.

Generally speaking, the younger children do not spend much free time with the adolescents. Several respondents did mention, however, that they find that the older teens try to get the younger ones to smoke. They suggest that the older ones do this to increase their control over the younger children.

It was felt by the youth that adults in Ellenburg smoke substantially and that even in public areas where it is marked that one is not supposed to smoke, adults do regardless. The respondents find that adults lack respect for non-smoking areas. This information is also in contradiction from that which we cull from the resource data which indicate that cigarette smoking is only permitted in 35% of the agents inventoried. Despite this apparent vigilance it appears that both pre-adolescents and adults smoke openly and with little respect for what appear to be fairly strict regulations.

Similar to youths in Steinback, these respondents were fatalistic regarding their future as non-smokers. They believe that they will most likely be unable to resist the temptation of smoking once they move on to secondary school where smoking is accepted.

Interviewer: Have most of the youth your age tried smoking, or smoke regularly?

Respondent: I am almost certain that everyone in 6th grade has already tried, or will try by first year of secondary school. Our English teacher even told us once; "Next year, three quarters of you are going to be smokers". And its true because once you get over there, there are lots of influences. If all of your friends smoke, even if you don't want to, you are tempted, and its your friends, so you want to do like they do.

Again, the choices available for youth in this territory are grim if one wishes to remain a non-smoker. When taking into account the narrative materials, it appears that at all levels, both structurally and in terms of social norms, smoking is encouraged.

Aurelius

Aurelius is another remote town not 50 km from Steinback. It is situated on lake Aurelius, a lake which provides for a significant amount of tourism to this village in the summertime. The pre-adolescents of Aurelius who responded to the 1997 questionnaire had, for the most part, never tried smoking (63%). Aurelius is somewhat of an island, surrounded by two economically disadvantaged towns. It is a relatively

prosperous territory with a median household revenue of \$30,013 and a 17% unemployment rate for people aged 15–24. Much of the local economy is supported by the lumber industry although two companies have recently opened up in the town, one of which produces cement. The local population in 1996 was 865 people.

Respondents reported that most youth of their age hide their smoking, if they do smoke, given that most of the adults in the village believe that smoking is not good for children and that being seen doing so gives rise to a negative reaction from adults. Respondents report that there is an important surveillance of smoking by adults.

Interviewer: What do the adults in your village think of youth your age who smoke?

Respondent 1: Well, its hysteria.

Respondent 2: Like the other day, I went to the canteen. I was with some friends and there were a bunch of guys. I passed in front of a girl and she saw me. She told my mom. Then my mom thought that I was fooling around with the guys and that I had smoked. But I just went to the canteen.

This surveillance by adults is complimented by the agent information in which we find that 77% of all agents inventoried restrict smoking on their premises.

Around the age of 14–15, however, there is a tacit understanding that it is permitted for teens to smoke. Smokers of this age were described, by the younger teens however, as being "bad". The smokers were also viewed to be youth with problems: "The adolescents smoke to forget their problems like heart break or being broke." Generally speaking, the younger teens and adolescents do not spend their free time together as the younger ones are scared of the older ones, particularly the older adolescents who hang out in gangs (who are, incidentally, also those that smoke). It is interesting here to note that smoking is considered to be a deviant behaviour, something that marginal youth engage in.

According to the interviews, it is nearly impossible for youth of their age to procure cigarettes in the town's stores. The law forbidding sales to minors under the age of 18 is strictly adhered to by all cigarette vendors.

Interviewer: Is it easy to buy cigarettes at the corner store?

Respondent 1: Well now, with the law, its 18 years and over...

Respondent 2: Before the law we could get cigarettes but its become so hard for us to buy cigarettes unless we're 18, and you just can't get any if you are under 18.

Despite the tight restrictions on smoking and minors in the town, there is a fairly large percentage of agents

inventoried that sell cigarettes (53%). However, the number of agents that both sell cigarettes and show signs indicating that they sell cigarettes is fairly low at 20%. There are, furthermore, many non-smoking public places in town and at school it is strictly forbidden to smoke. The general portrait of this territory, according to the respondents is of an environment which is intolerant to smoking.

Dubos

Dubos is an urban territory bordered by a railroad track and a main traffic artery. Of the pre-adolescents from this territory who participated in the 1997 study, only 26% had began experimenting with smoking. This territory is very disadvantaged with a 16% unemployment rate for persons aged 15–24 and a median household revenue of \$23,995. It had a total population of 6750 in 1996, much of which is first generation immigrant.

Of the pre-adolescents interviewed they associated smoking among youth with delinquent, non-conformist activities; smokers are those who have problems at school, who tease other children, who tend to be violent and mean.

Interviewer: Are there many youth who smoke in your neighbourhood?

Respondent 1: Yeah. They often go to the park to smoke. They make fun of the other people. They want you to go with them. They say; “Come with us, its fun what we do. We break windows and all kinds of things”.

Interviewer: And how would you describe the youth who smoke in your neighbourhood?

Respondent: They are closed in on themselves, they don't speak to anyone anymore, they become violent. I asked a friend why she smoked and she said that smoking helps her express herself, she becomes a different person.

In terms of capability, it is intriguing to consider that the respondents themselves interpreted other youth's smoking as a way of expressing themselves, suggesting that the possibilities for youth expression are limited. The practice of smoking is associated with being mature, of trying to be respected. Many of the pre-adolescents interviewed also felt that youth smoke in the territory when their parents pay no mind. Generally speaking, adolescents are poorly perceived by people in the area; there is an antagonistic relationship between adults and adolescents.

Interviewer: What do people in the neighbourhoods think of youth who smoke?

Respondent: When parents see youth who smoke in their heads they think that everyone smokes. They think that all adolescents are the same. They speak about adolescents as if they were the worst thing that could exist on earth.

The respondents voiced knowledge, however, that youth's smoking is under surveillance in the territory and that it is fairly difficult for under-aged people to obtain cigarettes in stores. Indeed, 30% of the agents have active surveillance of smoking activities on their premises and 79% of the agents forbid smoking, this despite the fact that several stores in the area sell cigarettes to people who are under-aged. The school also sends mixed messages to the youths. There are no-smoking signs all over the school but the teachers smoke.

Discussion

This research project sought to enlarge the notion of context in public health research to explore place as a location where social structure has an impact on pre-adolescent's smoking and to analyse smoking in terms of the meaning that people ascribe to it. We began, in a more traditional sense, by examining the relationship between the individual characteristics of the families (their SES) and smoking-related resources in the territories.

When we turn to the focus group materials, however, we quickly realise that people's social practices are not always the direct reflection of the instantiations of the social structure, suggesting that people have different ways of interacting with and interpreting the social structure. One of the assumptions of our research project was that we cannot necessarily infer from the objective measures of the social structure how people are using and interacting with them, the point being that context is neither *just* the reflection of the distribution of individual characteristics nor *just* the attributes of the area, but is also the significance that these characteristics and attributes hold for people. People do not just react in generalisations to structure but understand and interact with it in different forms. The discrepancies between the smoking initiation rates and the structural aspects of some of the territories are partly explained by the qualitative data that explore the meaning of the structure and social practices as well as people's agency.

We thus find that the narratives provide invaluable insights into the dynamic relationships between human agency and wider social structures that underpin inequalities in health (Popay et al., 1998). Narratives have embedded within them explanations for what people do and why—which, in turn, shape social action. Pavis et al. (1998) arrived at similar conclusions in their

study of smoking and drinking among 15/16 year olds in Scotland. They found that structural factors, such as gender, day-time occupation, income and the reported behaviour of friendship groups supplied individuals with meaning and choices but also constrained their perceptions and the options that they considered open to them. Similarly, Graham's study (1987) of low-income women with pre-school children renders the argument that these mothers smoke as part of the structured way in which they protect time for themselves and deal with the strain of difficult socio-economic conditions. In her study of young women and smoking, Daykin (1993) also discusses the important role of structure in constructing choices for people as well as imposing constraints upon their practices.

Not only is the narrative material crucial for integrating meaning into context studies, but without it our interpretation of the quantitative material would have been much less rich and potentially erroneous as we might have generalised that the "objective" aspects of territories yield differential disease smoking rates without any conception of how these "objective" aspects are related to people's social practices and what the resources mean to people in the territories.

Generalities are also insufficient if one considers that the routines described by the pre-adolescents across the four territories differed vastly from one place to another. The pre-adolescents were acutely aware of the everyday activities of people in their territory, activities ranging from illicit sales of cigarettes in Ellenburg, to the utilisation of the "wall" as a place dedicated to youth smoking in Steinback, to the strict adherence to the law by cigarette merchants in Aurelius and the interpretation of smoking as a way of expressing oneself in Dubos. These routines inform us as to the awareness that people have of the social practices of others around them and also speaks to their notions of agency as these practices will either constrain or permit future activities.

It may be useful then to reconsider the way that questions of accessibility and agency are implicitly conceived of in context studies. What we cull from the focus group data is that accessibility is not just a question of "objective" choice, or the resources that are present in one's territory, but rather can be understood in terms of the ways in which the rules and resources manifest themselves and are employed by populations. According to the resource data, for example, Ellenburg has a significant number of resources that restrict smoking. It becomes clear however from the focus group data that pre-adolescents in this territory do not feel, despite the resource data, that there is much possibility of remaining a non-smoker given the social practices of people in the territory. Alternatively, the pre-adolescents of Aurelius speak of the normativeness surrounding smoking in their town: the fact that

smoking is frowned upon by adults and that it is difficult for youth to procure cigarettes.

We extract from the narratives that the structure does not just sit there constraining actors by its formal characteristics (Ortner, 1989), but that it recurrently poses problems to actors; structure is practiced, lived in, enacted and challenged. The structure is both enabling and disabling with regards to smoking practices and the pre-adolescents are both aware of the dynamics and participate in it. Pavis et al. (1998) similarly summarise their findings by noting that social structures only exist to the extent that individuals actively construct them through their daily activities. Constraints are therefore not equivalent to not having choice, for if so people would simply be reacting to structural forces. When the pre-adolescents of Ellenburg voice fatalism with regard to their future as non-smokers they are not passive actors in this relationship but are themselves creating conditions under which it will be difficult to remain non-smokers.

Amartya Sen's capability theory (Sen, 1992) proposes a way of articulating the relationship between resources that is not just based on accessibility. Briefly, Sen's notion of equality moves beyond a conceptualisation based on goods themselves, or on the utility extracted from goods, by focusing instead on what people are actually able to extract from goods given their particular needs, abilities and desires. This he terms capabilities. Rather than basing one's evaluation of equality on access to resources he argues that we should examine the choices structured by the situation that individuals are in. Comparisons of resources or primary goods will therefore be insufficient as a basis for assessing equality. Empirically, by focusing on capabilities rather than just accessibility to resources, people's social practices inform us as to their constraints and opportunities.

In terms of capability theory, the pre-adolescents of Aurelius describe numerous social practices that inform us as to the opportunities that youth have with regard to abstention from smoking. While there are many agents that sell cigarettes, and few agents that display signs indicating that they abide by the law forbidding sales to minors, the youths are aware of the law and know that procuring of cigarettes is close to impossible. In Steinback, on the other hand, the observation that parents have no control over the youth's smoking practices and that smoking is permitted at the junior high level gives indications of the constraints and opportunities these pre-adolescents face.

Conclusion

Theoretically this research attempts to elaborate on the link between structure and agency. In doing so, it confronts the age old philosophical debate, traced in

Occidental societies back to classical Greek texts, of the role of free will versus determinism. While there has not been enormous debate centred on this question in contextual and inequalities research, some are beginning to realise its importance and place the issue on the table (Popay et al., 1998; Muntaner, Eaton, & Chamberlain, 2000). The argument developed here is that health-related practices are not simply the result of the structure having acted on individuals, but rather, that individuals “act out” the structure in their practices and these same practices feed into the larger system, thus recreating conditions that make the structure possible.

In developing the notion of collective lifestyles we attempted to integrate some of the issues from both the health inequalities and the lifestyle debates. The notion of collective lifestyle does not just include health behaviours, but seeks to recognise that behaviour occurs in social settings that differ among individuals. The focus therefore is the complex forms of interaction between patterns of individual behaviour, collective behaviour and sets of resources (Rütten, 1995). Thus, collective lifestyles could help us understand that the inequalities in health we study are the result of *both* our socio-economic conditions, as well as our “behaviours”.

But even when we replaced the purely behavioural notion of lifestyle with one that was more “context” based (i.e. by adding structural variables to our study), there were still problems that remained. First, we were confined by the methodological and conceptual tools offered by classic epidemiology; socio-economic conditions quickly became either education, income or class, and behaviours were conceptualised as smoking initiation. Contextualisation could not simply involve the addition of variables to a regression equation. This is where practice theory became critical. With practice theory “behaviours”, as viewed by the epidemiological paradigm, are just one of many practices that might be influencing inequalities in health outcomes. The social structure, on the other hand, can be represented by variables such as income, class or education, but other instantiations were possible.

So, for instance, smoking initiation was described in terms of where people smoked, where they obtained their cigarettes, how smoking was viewed in the territory, etc. These are all social practices that move beyond the notion of smoking as simply a behaviour. The social structure as well is examined not just as the objectifiable aspects of the territories, such as number of stores selling cigarettes, etc., but also in terms of what it represents for people in their territories; how they interact with it. Indeed collective lifestyles integrate population’s socio-economic status, the resources in communities in relation to smoking and people’s social practices in relation to smoking. Collective lifestyles therefore help us comprehend how it is that smoking initiation differs based on local particularities.

The findings of this study point to some important potential implications for future public health interventions as well. Given that each of the territories studied here exhibited different social practices, norms and cultures in relation to smoking, it would be critical for health promotion and public health programs to tap into these “collective lifestyles” in order to understand where and why pre-adolescents are smoking. As suggested by Daykin (1993), smoking prevention strategies must address the impact of inequalities on young people’s lives. According to this study, this would require programmes that integrate the local meanings of smoking into the tactics to reduce it.

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Appendix A

Agents used in the denominator for each resource category are given below.

<i>Permit</i>	Hotels, health organisations, schools, municipal services, leisure centres, sports centres, leisure associations, sports associations
<i>Sale</i>	Hotels, tobacconists, health organisations, schools, municipal services, leisure centres, sports associations, leisure associations, sports centres, corner/grocery stores, heart health committees and pharmacies
<i>Forbid</i>	Hotels, health organisations, schools, municipal services, leisure centres, sports centres, leisure associations, sports associations

<i>Inform</i>	Health organisations, schools, leisure centres, sports associations, leisure associations, sports centres, pharmacies
<i>Signs-ban</i>	Hotels, health organisations, schools, municipal services, leisure centres, sports centres, leisure associations, sports associations
<i>Signs-minors</i>	Hotels, health organisations, schools, municipal offices, leisure centres, sports centres, sports stores, corner/grocery stores, pharmacies
<i>Surveillance</i>	Schools, leisure centres, sports associations, leisure associations, sports centres
<i>Signs-minors</i>	Hotels, health organisations, schools, municipal offices, leisure centres, sports centres, sports stores, grocery/corner stores, pharmacies

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