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Talking about risk-taking with potentially 'problematic' risk-takers: a study of preventive interactions under high uncertainty

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Drawing upon examples in the realms of crime prevention and public health, this article discusses the interactions between agents involved in preventive strategies and people identified as likely to engage in 'problematic' risk-taking in areas where there are frequently high levels of uncertainty. Considering the substance of the interactions between risk assessors and/or risk managers and risk bearers provides ground for challenging common assumptions regarding the relevance of the persistent divide between 'expert knowledge' vs. 'lay beliefs' and to develop an alternative framework for analysing the judgements of the various stakeholders regarding uncertainty, namely: probabilistic, clinical and experiential knowledge of risky situations. In turn, analysing the extent to which these sources of knowledge are interrelated and used is indicative of the extent to which uncertainty is acknowledged – or denied – through prevention, once it has been turned into interactions that involve risk assessors/managers and risk-takers.

Keywords: social policy; crime prevention; public health; risk communication; risk-taking; social risk

1. Introduction

Generally speaking, prevention refers to any action aimed at stopping something from happening (Stevenson and Waite 2011). More specifically, prevention is a function of certain policies and measures that are directed towards unwelcome events – such as fire, crime or illness – that are meant to be avoided. While prevention is relevant in many salient areas of policy-making, the focus in this article is directed towards public health and crime control. These are two areas in which preventative strategies have been most readily applied, where uncertainty is high and is understood in various ways. Turned into everyday practice, prevention relating to crime or illness chiefly draws upon interactions between agents who are commissioned with a preventive assignment (a duty to prevent unwelcome events from happening) and people who are identified as likely to face unwelcome events. Interactions between agencies that are commissioned with risk assessment and/or risk management and (potential) risk bearers are commonplace. For example, nurses who oversee childhood illness prevention meet with infants that have to be vaccinated, as well as their parents; or, probation officers meet with ex-convicts who are expected to desist from committing crime. These interactions centre on human

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behaviour, which is, in turn, regarded as both a potential hazard and a lever for protection against harm. In the academic world, predicting behaviour in contexts of high uncertainty has been repeatedly debated, as has been the case in the domains of public health and crime control. If we shift from academia to practice, we must ask how this debate can impact practice: what should be done about human behaviour? What kind of knowledge of uncertainty is mobilised during interactions and processes involving risk experts and the public?

Interestingly, risk communication scholars invite us to consider preventive strategies as interactions and to question the distribution of power in these interactions. According to the often cited definition by the National Research Council (1989, 2). risk communication is meant to be 'an interactive process of exchange of information and opinion among individuals, groups, and institutions'. Thus this is not merely 'one-way messages from experts to non-experts'. A recurring question raised by risk scholars is: does this definition adequately depict the reality of the interactions between stakeholders involved in preventive strategies (Kasperson 2014)? Although this interactive understanding has been widely praised and seen as beneficial for the perceived legitimacy of risk management processes (Arvai 2003, 281; National Research Council 1989), Árvai (2014) has argued that it is scarcely reflected in practice, with risk communication still commonly being considered as a 'one-way transmission of risk information from experts to lay people' (2014, 1246). Largely in line with Arvai's view, preventive strategies in matters of crime or public health are often designed in accordance with the perspectives of experts, which are meant to be assimilated by risk bearers/takers. This may entail that any 'lay peoples" characterisations of what risk experts frame as hazards are overlooked for the sake of almighty expert knowledge. Throughout the research programme upon which this article is based,¹ the analysis of the development of preventive logics in social policy and practice initially designed to fight social disadvantage provided many examples of mismatch, or 'persistent' risk behaviour, in spite of considerable preventive efforts. However, the observations revealed that 'expert' knowledge of uncertainty does not only draw upon behaviour prediction. In contrast, a variety of sources of knowledge were taken into account. As a consequence, the much debated but persistent opposition between 'experts' knowledge' vs. 'lay belief' (Wynne 1996) is not satisfactory for capturing the complexity of preventive interactions, especially when the uncertainties are sizeable. In contrast, analysing the distribution of knowledge in preventive strategies prompted my development of an alternative analytical framework about what informed the judgements of the various stakeholders regarding uncertainty, namely: probabilistic, clinical and experiential knowledge of risky situations. In addition, in this article, it is argued that analysing these three sources of knowledge and the extent to which they are used and interrelated offers insight about the ways and the extent to which uncertainty is acknowledged or denied through prevention once prevention is embodied in the interactions that involve risk assessors/managers and risk-takers.

To this end, the particular challenges of preventive strategies in crime prevention and public health with regard to risk-taking are explained and illustrated in section two. Prevention is widely praised and generally welcomed with regard to both crime control and public health; however this is often when it targets 'most at risk populations'. In these risk domains, targeting is difficult, as risk is a multi-faceted concept that potentially relates to various frames of understanding. As a result, 'expert knowledge' of risk could be better perceived as a conflicted area/scene that draws upon various sources of knowledge, as is suggested by the model sketched by Walklate and Mythen (2011).

In section three of the article, the model proposed by Walklate and Mythen (2011) is discussed and adapted to capture the substance of preventive interactions that addresses 'problematic' risk-taking in crime prevention and public health, as sketched in section two. It is argued that whilst probabilistic knowledge is widely praised and extensively used, it does not cover the whole range of knowledge at stake in preventive interactions. In addition, it is argued that clinical knowledge cannot and should not be seen as reducible to probabilistic knowledge. As a result, expert knowledge of risk in a context of high uncertainty is far from monolithic. In addition, in the areas of public health and crime control that overlap with social policy, analyses of problematic risk-taking suggest that non-professional knowledge of uncertainty is not always ideally captured by the notion of 'lay beliefs'. This prompts me to further explore and discuss the idea of 'experiential knowledge' of uncertainty.

Based on recent qualitative research on 'targeted prevention' carried out in Montreal (QC), Canada, section four offers a grounded discussion of the use of the various sources of knowledge of uncertainty and how they are articulated in relation to each other. Two case studies show that preventive interactions reflect the extent to which the limitations of risk knowledge are acknowledged; furthermore, this not only pertains to 'lay beliefs' but also to expert knowledge, regardless of whether it is based on probabilistic or clinical knowledge. One of these cases is a sexual health clinic offered to adolescents, which has been running for over 30 years in Downtown Montreal. The other is a substance use prevention project offered to 12–20 year olds in a secondary school where addiction issues and drug dealing issues were detected. These cases are illustrative vignettes that allow us to tease out some of the key problems and issues with targeted prevention measures in conditions of uncertainty.

2. The popularity of targeted prevention and its dilemmas

Over the last decades, numerous governmental and non-governmental agencies such as the World Health Organization (in line with the Ottawa charter, 1986) and the International Crime Prevention Centre (founded in 1994) have forcefully advocated preventative approaches rather than curative approaches on the premises of supposedly lower financial and social costs. Prevention is, therefore, commonly regarded as a positive social good, in line with increasing concerns regarding the future in Western societies (Giddens 1999). However, in both crime control and public health, the question of the efficiency of prevention has frequently been raised. While universal prevention (pertaining to a whole population regardless of exposure to unwelcome events) has proved desirable in some domains (for example, vaccination campaigns for infants), prevention is often said to be more effective when it targets certain sections of the population that are regarded as more prone to the exposure of unwelcome events, in line with the views of Lalonde (1974). Thus, while prevention is generally welcome, targeted prevention is preferred.

Yet, targeted prevention entails the identification of the most 'vulnerable' sections of the population. This can prove difficult, especially when prevention addresses situations in which risk relates to the behaviours of some people, whose actions are said to pose a threat, either for themselves (for example, in cases of

alcohol/substance use) or for others (for example, in cases of interpersonal violence). In accordance with Zinn's (2015) perspective, targeted prevention has to do with risk-taking that is identified as 'risk behaviour', framed as 'problematic' and tackled through an 'investigation of factors that influence risk behaviour' (2015, 104).² Such situations are often difficult to assess, and interventions are fraught with difficulties. How likely is a person to harm oneself because of alcohol consumption? How likely is a parent to cause harm to his/her offspring? What might be the potential iatrogenic effects of intervention, and how can these be weighed against the possible benefits? It is essential to remember that the outcomes of risk assessment can be potentially harmful if errors in judgements are made regarding who is at risk or deemed to be risky. Kemshall (1996), for instance, alludes to the potential harms of cases of 'false negative' risk assessment (possibly resulting in non-access to preventative measures despite being relevant) and cases of 'false positive' risk assessment (possibly resulting in feelings of injustice or self-fulfilling prophecies when some people have been wrongly assessed as vulnerable (Kemshall 1996 quoted in Walklate and Mythen 2011, 103; see also Szmukler 2003, 206). Overall, while targeted prevention is widely praised – as potential harms are largely regarded as unacceptable – turning it into preventive strategies towards potential risk-taking behaviours appears to be challenging (Brown and Olofsson 2014; Collectif 2011). This is exacerbated when crime or health issues intersect with social policy issues.

For a long time, social inequality was regarded as a major social problem in a number of Western countries, notably in some parts of Europe and North America. Reducing social inequalities was an important goal and challenge for social policy; social provisions and professional expertise were developed to support the redistribution of income and to correct disadvantageous situations. Over the last three decades, social inequality, far from becoming imaginary, nonetheless faded away from governmental ambitions. Subsequently, social policy gradually shifted from a commitment to reduce social inequality to a set of residual provisions limited to those regarded as most in need, according to a popular view of efficiency.

At the same time, social policy measures have been merged with other priorities, such as crime control (especially in Europe – Knepper 2007; Baillergeau and Hoijtink 2010) and health (in North America – Mayer 2002). Gradually, just as in other areas of the 'risk-society', risk-profiling and pre-emptive intervention have become self-evident purposes in social policy and usual business for front-line professionals such as social workers (Kemshall 2002) and criminal justice workers (McCulloch and Pickering 2009; Mythen and Walklate 2014). In addition to taking part in risk assessment, agencies involved in the implementation of social policy have evolved into 'risk management agencies', and they are increasingly expected to professionalise as such, as they have in other areas of risk management (Renn 1998, 50).

Gradually, languages and discourses of risk have supplanted those connected to class (Beck 2009), and socially marginalised sections of Western societies have been framed as 'vulnerable' or 'at risk' (Sylvestre 2012). As a result, risk-profiling techniques and risk assessment do not only apply to obvious cases in which people have much more to gain rather than to lose from being assessed as at risk (for example, women screened for breast cancer). Furthermore, preventive strategies now also apply to situations involving people who, as a result of social characteristics, are confronted with a 'higher risk of risks' (Frohlich and Potvin 2008; 218), such as living in poor housing conditions would increase the risk of health issues. In addition, exposure to high uncertainty leads these people to simultaneously experience high

levels of anxiety. When addressing these situations, preventive strategies confront high uncertainty in various ways because risk relates to human behaviour, but also because there are multiple risks at play. When framed as 'problematic risk-taking', repeated truancy is often not an isolated issue. Therefore, preventive models that have only been informed by predictive techniques have been rightly analysed as ill-suited for addressing the complexity of such situations (for example, France, Freiberg, and Homel 2010). However, behaviour prediction has not been the only rationality involved in the assessment of uncertainty in the preventative strategies considered in this article. Hence a broader analytical framework is necessary, as suggested by Walklate and Mythen (2011).

3. Various sources of knowledge involved in preventive interactions: probabilistic, clinical and experiential

Walklate and Mythen (2011) explore the variety of 'narratives' involved in risk management strategies and practices in the UK in order to distinguish between actuarial risk assessment (stemming from probabilistic research related to a 'scientific narrative') and clinical risk assessment. In so doing, they show that in spite of the perceived differences, actuarial risk assessment and clinical risk assessment. regarded as expert narratives, are largely preferred in preventive strategies, side-lining an 'experiential narrative' on uncertainty. While I would agree that little attention has been paid to the experiential knowledge of uncertainty in targeted prevention – both with regard to crime risks and health risks – I would like to approach the three concepts from a slightly different perspective. Though embedded in distinct worlds (science, clinical practice and intimate experience of risk), the three broad lines of flight reflect three different sources of knowledge of uncertainty that are potentially involved side by side in all kinds of preventive strategies. As such, they are commonly addressed in targeted prevention, notably in the case studies discussed in section four. Before delving into the analysis of the distribution and the circulation of knowledge in preventive strategies, the three sources of knowledge of uncertainty are further introduced and discussed.

A well-known way of assessing crime and/or health risks is to resort to knowledge deriving from statistical calculations of probability of unwelcome events. Typically, regarding crime risks, probabilistic research has focused on criminal careers, searching for recurrent features of individuals and their proximate environments (family, neighbours and friends). When it turns out that such features are commonly displayed among individuals engaged in a criminal career, they are labelled risk factors, for example at the individual level (such as low intelligence and attainment, empathy and impulsiveness) and the family level (such as child rearing methods and disruptive families) (Farrington 2007). On the basis of risk factors, risk assessment tools are thus designed and implemented by front-line professionals in their daily practice of prevention in various policy areas that extend beyond mitigating crime risks to include reducing health risks, among others.

This has been a very influential approach for informing preventive strategies in the UK (Kemshall 2002; Parton 2010; Taylor-Gooby 2008) as well as elsewhere in the Western world since the 1990s (O'Malley 2010). Its popularity can be indexed to the fact that it was developed within academic circles, and it is therefore seen as a method for informing preventive strategies with 'reliable' knowledge backed by scientific legitimacy. However, in spite of its considerable popularity, probabilistic-based risk assessment has also been disputed within academic circles, notably because of its poor predictive power with regard to individual behaviour, especially within the sphere of criminology (Crawford and Traynor 2012; Zedner 2007) but also beyond (Rothstein 2003). In the words of Walklate and Mythen (2011, 103): 'there is no necessary corollary that what might be predicted for a group can be predicted for an individual'. Moreover, the premise that people act as purely economically rational actors conflicts with the reality of the 'social actors' that front-line professionals working in targeted prevention encounter daily (Munro 2008; Kemshall 2010 – in the UK; Malochet 2011; Boucher 2011 – in France). In many risk areas, probabilistic knowledge has been challenged by high uncertainty (Wynne 1992) and is impacted by policy constraints (Popay and Williams 1996). Scientists have acknowledged the limitations of the predictive power of probabilistic research (Farrington 2007), but a gap remains between research results and the policies that they impact (Parton 2010 – see also Taylor-Gooby 2008). In fact, probabilistic knowledge is frequently used in risk assessment, both in crime prevention and public health.

In contrast, clinical risk assessment derives from 'individual diagnostics techniques geared toward identifying individual personality factors and situational triggers for behaviour' (Walklate and Mythen 2011, 103). Typically, upon referral regarding a child reported for truancy, a social worker will investigate the situation of the child and his/her proximate environment. This occurs during a meeting with the child and his/her relatives and upon reading his/her record. Such an investigation facilitates the measures that are intended to reduce or mitigate the risk of the child dropping out of school without receiving a degree or any other unwelcome developments in the future such as engaging in criminality or facing low prospects on the labour market. Thus, clinical risk assessment (primarily) relies on the direct identification of symptoms and the professional interpretation of symptoms and/or facts.

Clinical knowledge is grounded in professional education and training and professional experience which are accumulated over the years and nurtured by the practice of risk assessment. Clinical risk assessment is rooted in direct, face-to-face observation and the evaluation of persons deemed to be at risk, in a 'personalised relationship', as Castel (1983) observed with respect to medical physicians and mental health doctors and their patients. Therefore, in contrast with probabilistic risk assessment, clinical risk assessment could be regarded as based on situated knowledge. Clinical risk assessment is largely related to what Kemshall coined as the 'professional knowledge of workers' (2000, 150), during observations of probation workers who were involved in recidivism (crime) risk assessment and management. In addition, unlike probabilistic risk assessment, clinical risk assessment is deeply rooted in some occupational cultures, notably general medical practice (Malterud 2001), social work and nursing but also in probation work, where for a long time it was preferred for the assessment of danger (Parton 2010). One can also think of 'special prevention' as it was carried out in France in the 1960s among members of youth street gangs (Hebberecht and Baillergeau 2012; Robert and Lascoumes 1974). In fact, clinical risk assessment was tailored to achieve the assessment of 'dangers', 'trying to identify and contain individuals who were particularly prone to "violent and unpredictable action" (Parton 2010, 52; quoting Castel 1983), which is to say high risk cases, such as what Dale et al. (1986) refers to as 'dangerous families'. Yet, as Castel argues, by flagging danger we are also making an assumption about a potential future. Danger is only proven when the event that risk regulators are trying to prevent actually happens. Therefore, clinical risk assessment contains a degree of uncertainty. Additionally, because it relies on personal judgement, clinical risk assessment is sensitive to subjectivity, possibly resulting in errors. This is explicitly acknowledged by some psychiatrists (Gravier 2009).

Because it is situated knowledge, grounded in face-to-face interactions, clinical risk assessment can consider a wide range of information and provide an 'understanding of particulars to be integrated with the understanding of universals' (Malterud 2001, 398). Furthermore, in cases of doubt, it can generate complementary information by asking questions to those possibly at risk or by carrying out complementary investigations within their proximate environments. As argued by Walklate and Mythen, both clinical and probabilistic knowledge are rooted in historical data, thereby 'never provid[ing] us with anything more than hypotheses concerning what might happen in the future' (2011, 103). However, whilst probabilistic knowledge is constrained by its limited recourse to macro-historical data, clinical knowledge can consider both macro-historical and micro-historical (situated) data and confront them critically, thereby allowing for more accurate hypotheses in certain circumstances. In order to refine their assumptions, clinical workers (clinicians) who are committed to risk management – next to risk assessment – can also take advantage of clinical interaction and test the capacity of patients for (risk) resilience as well. For example, a nurse who is dealing with a girl who is assessed to be at rather high risk of a sexually transmissible disease could also, by talking with the girl, assess to what extent she could draw on support from her social network in the event of an unfavourable situation.

However, risk assessors and risk managers are not the only ones who have opinions on risk. Risk perception studies have provided opportunities for discussing the views that are peculiar to those who face risks in their daily lives, notably those of potential victims. Henwood, Pidgeon, Sarre, Simmons and Smith (2008) have researched risk perception among people living next to power stations: Kemshall and Wood (2007) have researched the position of people living near convicted sexoffenders. Bröer et al. (2014) have researched the relationship between policy and perception regarding environmental health risk (see also de Graaff and Christian 2012). These studies offer a wealth of insights into various forms that the awareness of danger takes and the multiple logics of diverse coping strategies. Likewise, the views of those who are engaging in 'problematic' risk taking have been investigated, notably regarding behaviours such as smoking (Peretti-Watel et al., 2007) as well as other substance use (Bloor 1995; Kemshall 2000; MacDonald 2010). Lay knowledge of uncertainty is rooted in personal experience and possibly in 'common sense' rather than in science or professional expertise. As such, it is involved in risk mitigation or (informal) preventive strategies at the individual level, and this was the case long before prevention became a policy matter (Lafortune and Kiely 1994). Is there anything inherent about 'lay' understandings of risk? Drawing upon feminist informed work applied to the study of domestic violence, Walklate and Mythen (2011 - see also Walklate 2011) argue that the intimate experience of living with what is framed as risk provides - as a form of 'knowing otherwise' - an intrinsic added-value for domestic violence risk assessment (Walklate and Mythen 2011). As such, this can become a specific resource for the development of self-resilience in situations of adversity (Walklate 2011). In this sense, their view contrasts with those of Prior (2003). In his worthwhile attempt to specify how scholars regard laypeople as experts, Prior sketches two main lines of thought: having experiential knowledge of a condition and 'be[ing] on a par with those who have scientific training' (Prior

2003, 45 – drawing on Arksey 1994; Epstein 1996; Wynne 1996). Prior tends to restrict experiential knowledge to the knowledge of a condition, arguing further that lay knowledge is not reliable because it can be 'plain wrong about the causes, course and management of common forms of disease and illness' (2003, 45). In the case of targeted prevention, the views of potential risk takers could indeed be vulnerable to errors. However, as mentioned, since it is important to acknowledge the uncertainty that challenges probabilistic and clinical knowledge to some extent. Thus, experiential knowledge may not be a much less robust source of the knowledge of risk.

In theory, taking experiential knowledge into consideration could help elucidate why some people seem to be 'resistant' to preventive strategies offered by professionals. For example, accounting for experiential knowledge could help clarify why some women - even when they are aware of the risk of sexually transmissible diseases - would rather accept unsafe sex than challenge the preferences of an oppressive partner. For example, a woman might choose to risk her physical health to remain with a man who financially supports her rather than risk rejection and the possibility of homelessness. Experiential knowledge could also help explain why some young people engage in (criminal) gang membership – thereby risking the acquisition of a criminal record – when this seems to be the only available way to achieve social recognition. For example, a young person who experiences multiple rejections from mainstream society might choose to start selling drugs to earn respect within a criminal gang. These examples show that some people who engaged in risky behaviour have to mitigate risks in a context that constrains their freedoms and thus their decisions in favour of risk avoidance. Similarly, while some people in some circumstances tend to resort to substance use for recreational purposes or for increasing their work productivity, some homeless young people embark on substance use because this seems to be the only coping strategy available to them for dealing with high degrees of anxiety (for instance, when forced into prostitution or high risk criminality - see also Wigginton and Lafrance 2014; Zinn 2015, 109). Thus, in a context of high uncertainty such as observed in targeted prevention, all three sorts of knowledge of uncertainty can apply, and all of them are partly robust and partly vulnerable. Yet, the extent to which the preventive strategies carried out by professionals take experiential knowledge into account is questionable, and the ways in which these sources of knowledge are used in preventive strategies are left to be discovered. It is in this respect that the subsequent section intends to contribute.

4. Currents and trends in preventive interactions

It is important to acknowledge that probabilistic, clinical and experiential knowledge overlap in varying ways and degrees. Some time ago, Polanyi (1958) discussed the role of 'personal commitments' in scientific research and discoveries in supporting the formulation of significant questions, thereby suggesting that expert knowledge partly stems from experiential knowledge (see also Wynne 1996). Additionally, individual risk-mitigating strategies may build upon 'common sense' or 'urban legends' (Biron, Charbonneau, and Morin 2010) but also partly upon probabilistic-based information collected from media sources such as the Internet and previous expert judgements grounded in clinical observation. However, the three types of knowledge that Walklate and Mythen sketch out as ideal types are distinctly perceptible in preventive interactions. Furthermore, in practice, they come into being as much more

than a mere opposition between 'expert knowledge' and 'lay beliefs', as reflected in the two case studies considered in this section.

One of these cases involves a sexual health clinic offered to adolescents, which has been running for over 30 years in Downtown Montreal. The other is a substance use prevention project offered to 12–20 year olds in a secondary school where addiction and drug dealing issues were detected (running for over 12 years, also located in Downtown Montreal).³ These two cases were selected because they are illustrative of a diversity of risk information to be considered in preventive interactions, including the personal experiences of 'risk-takers'; additionally, they provided a chance to study the articulation of various knowledge of uncertainty within preventive interactions.

To begin with, the two cases inform us that preventive strategies rely on a clear policy- and expert-driven assignment to tackle 'risk behaviour', as outlined by Zinn (2015, 101). Additionally, in the risk management policies, just as in other areas related to social policy and public health, the language of risk and vulnerability is widely used at the policy level but is framed more generally (therefore in line with Swift and Callahan 2009). While policy has explicitly recommended that attention should be directed towards vulnerable sections of the youth population in particular (MSSS 2004), there is no clear definition of the vulnerability or risk factors, leaving space for front-line professionals to make their own decisions about who is most at risk. This suggests that risk assessment that primarily draws upon clinical knowledge is accurate. It does not mean, however, that probabilistic data are not involved at all. In both cases, formal education provided the front-line professionals with a large amount of probabilistic knowledge of risk, be it about sexually transmissible illnesses or substance addiction, thereby influencing how they frame risks and risk-taking prevention. Their formal assignments are also significantly informed by probabilistic knowledge. Yet, front-line professionals have a degree of discretionary power regarding the extent to which they should or should not consider probabilistic risk knowledge. In the case of the sexual health clinic, risk assessment occurs alongside the assessment of actual issues, for example, thanks to screening for sexually transmissible illnesses. The diversity of their expertise enables nurses, social workers, medical practitioners and experts in sexual health to cover a wide range of issues (possibly) pertaining to their clients. Likewise, the substance use prevention project team makes use of various professional resources such as knowledge acquired through degrees in mental health and social work as well as additional theoretical and practical training in addiction or suicide and experience from working in the streets themselves.

In the case of the sexual health clinic, clinical risk assessment is also informed by reading patient/client records, which consist of a collection of previous assessments and judgements, some of which are made by other professionals. Thus, these might be grounded in clinical observation, but they might also offer insight from another context. Therefore, clinical risk assessment that resorts to record reading should not be assumed to be grounded in only clinical knowledge. However, a thoughtful clinician can, upon direct intercourse with a patient and/or his/her proximate environment, test the accuracy of earlier judgements against the current context and the current suspicion. Therefore, clinical risk assessment could be seen as more robust than a mere probabilistic risk assessment because of its potential to confront theoretical and practical knowledge at the time of interaction. As far as experiential knowledge is concerned, it is considered through the conversations that front-line professionals have with their clients, including some questions regarding their proximate environment. Therefore clinicians involved in the substance prevention project take advantage of the drop-in centre format, which offers young people a place to visit and non-judgemental interventions through which front-line professionals do not forbid substance use formally, even if it is clear that some of the young people use substances, but instead informs them about unwelcome consequences of substance use. By doing so, the substance prevention project resorts to all kinds of open-ended substance-free activities in which young people have chances to express their views on what is problematic about substance use. These techniques help clinical risk assessment to unravel some risks that were not suspected originally.

Moreover, the example of the sexual health clinic offers confirmation of the fact that in their daily preventive practice, clinicians not only draw upon 'rational knowledge' – informed by science or professional expertise – but also on 'in-between' knowledge (as suggested by Zinn 2008). Frequently having to deal with unexpected and complex as well as urgent situations, clinicians often have to make decisions on the basis of pre-cognitive knowledge. However, this example also shows that informal risk management strategies – carried out by clients prior to visiting the clinic – not only rely on 'in between knowledge' but also on the rational knowledge of some risks that are invisible to many risk assessment instruments, thereby suggesting that there are gaps in risk awareness (such as the risk of homelessness for women involved in 'unsafe sex') – unless risk assessors make explicit efforts to explore experiential knowledge through conversations with their clients.

The observations at the clinic showed that the risk of overlooking informal risk management strategies is mitigated by repeated talks with the clients and frequent case discussions amongst the various clinicians involved. As a result, clinical risk assessment relies on the three sources of knowledge discussed in this article, as do risk management strategies. Clinicians cautiously check risk perceptions among the clients as well as the state of their proximate environment: to what extent does their environment influence the risk perception of the client? To what extent would the client, peers or relatives support risk management strategies suggested by clinicians? However, the perceptions of adolescents are not acknowledged uncritically. 'Urban legends', in particular, are frequently criticised and firmly rejected by clinicians. In the case of the substance use prevention project, the risks associated with substance use do not seem to be discussed at the work floor level and are simply taken for granted. In contrast, there is some consideration of the varying degrees of 'resilience' that young people have, which is accounted for while training them to learn about their 'limits' with regard to substance use. Thus, preventive interactions show that there is space for a critical appraisal of 'lay beliefs', but also for considering some forms of 'knowing otherwise', deriving from the experience of a condition in a given context.

In addition, these preventive interactions reflect two ways of resorting to experiential knowledge in targeted prevention: on the one hand, getting to know how young people perceive the risks that are identified by professionals and informed by probabilistic or clinical knowledge and, on the other hand, learning about hidden risks that are not perceptible to probabilistic or clinical knowledge but which influence attitudes and possibly result in 'problematic risk-taking'. The observations confirmed that the people considered in risk assessment face risks that are framed as problematic in preventive strategies, but they also face other risks that are not considered in preventive strategies. Furthermore, they experience some of these as problematic and at times even consider these to be worse than the risks that are suggested and accounted for in formal risk assessment. Thanks to a cautiously built relationship of trust and open-ended talks, such risk information becomes perceptible to clinicians who incorporate it into follow-up interventions.

Returning to Arvai's invitation to discuss the extent to which risk communication interactions are 'a one-way transmission of risk information from experts to lay people', our examples reflect two concurrent dynamics. On the one hand, preventive strategies largely rely on professional knowledge – be it probabilistic or clinical grounded knowledge – and experiential knowledge is merely considered to better fight unfortunate obstacles in circulation of a mostly top-down framed preventive message. On the other hand, to some extent, the experiences of the young people are considered for their intrinsic value in terms of 'knowing otherwise' about risk, worth helping to refine the contents of preventive strategies. In the former case, experiential knowledge is deemed wrong – quite in line with Prior (2003) – and thus inferior to probabilistic and clinical knowledge. In contrast, in the latter case, experiential knowledge is regarded on equal footing as other source of knowledge of uncertainty that may be conducive to effective prevention.

5. Conclusion

Analysing the sources of knowledge and the extent to which they are used and interrelated is indicative about the ways and the extent to which uncertainty is acknowledged in preventive strategies in which experiential knowledge is considered. Doing so allows us to view the preventive interactions and take some purposive strides towards correcting risk-taking behaviours or convincing risk-takers of the value of expert knowledge. Furthermore, it enables us to acknowledge the limitations of risk knowledge, not only of 'lay beliefs' but also expert knowledge, be it based on probabilistic or clinical knowledge. As such, this could be seen as a contribution to both the 'what' and the 'why' questions raised by Arvai and Rivers (2014). Scrutinising the distribution of knowledge in preventive strategies also echoes Wardman's invitation to question the purpose of risk communication (2008). Here, risk communication can be viewed as a medium of a governmental enterprise, in which probabilistic knowledge and clinical knowledge have often been used very assertively, thereby overlooking other forms of knowledge of uncertainty, notably experiential knowledge. This assertiveness happens to be mitigated, as is illustrated by the cross-fertilisation of risk knowledge that is noticeable in the two vignettes involving preventive strategies. They both build upon several sources of knowledge of uncertainty rather than just on probabilistic knowledge, as is the case in many other areas where probabilistic risk assessment is overwhelming, in order to inform us about the reality of targeted prevention. However, the probabilistic knowledge is considered, albeit in a rather open and non-deterministic fashion. Probabilistic knowledge and clinical knowledge are combined so as not to exclude any other forms of knowledge of uncertainty and risk, notably experiential knowledge of risk takers. In this case, the professional judgement incorporates it into risk assessment and risk management also builds upon a degree of experiential knowledge, which clinicians cautiously acquire through certain ways of conducting intake interviews and screening talks, alongside some curiosity for the personal experiences of risk takers. Other examples

show that peer work and the past professional experiences of clinicians can help professional judgement in the consideration of experiential knowledge of risk in risk assessment and risk management. As such, the complexity of human behaviour – which happens to be a pitfall in many preventive strategies pertaining to crime and/ or health risks overlooking a 'false degree of certainty' (Renn 1998) – is not artificially reduced but is acknowledged in risk management strategies. In addition, considering a degree of experiential knowledge as a form of 'knowing otherwise' about risk provides preventive strategies with a chance to consolidate clinical knowledge and probabilistic knowledge by considering a wider set of information. It also suggests that, in cases of high uncertainty, it would perhaps be best to discuss the robustness of the various sources of knowledge at the work floor level.

One should, however, ask about how often preventive interventions actually reflect such a cross-fertilisation of risk knowledge, including experiential knowledge. Patients' knowledge of illness has been increasingly advocated as reliable in general health care; yet, it seems that when preventive strategies touch on situations involving vulnerable populations, professionals are more ambivalent. While taking the availability of 'wrong knowledge' into account happens to be seen as beneficial for the quality of interventions, it seems more difficult to accept that vulnerable populations can offer some robust knowledge regarding risks inherent to some complex situations that are not captured by prevailing risk assessment techniques.

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- 1. This research programme was funded by the Quebec's Provincial Fund for Health Research (2008–2013). In particular, the challenges of targeted prevention were explored at the level of theory, and an assessment of the impact of targeted prevention on the issues at stake and on the target groups was conducted. The research aimed to understand what prevention, in practice, could teach us about the social determinants of health and crime beyond policy intentions. The research programme primarily investigated the Canadian realities of targeted prevention, but it also considered a number of European countries such as the Netherlands, France, the United Kingdom and Norway. The two cases studies discussed in this article were part of this research programme.
- 2. For example, in harm reduction, substance use can be framed as 'recreational' or 'problematic'.
- 3. Both services are broadly directed towards youth. However, while the latter explicitly targets young people at high risk of engaging in substance use (Baillergeau et al. 2009),

the former is open to all young people living in a given territory. Nevertheless, our research was particularly focused on the capacity of the clinic to reach out and address the situations of vulnerability (Carde and Baillergeau 2013). In the case of the sexual health clinic, the starting point of the research was an invitation from the front-line team (consisting of medical doctors, nurses and social workers) for some sociologists to critically appraise their own practice with regard to the evolution of needs and turnout over the last few years. Is the target population actually reached? To what extent is the service accessible to those who need it? Through initial talks, vulnerability seemed to be a critical issue, with regard to social inequality on the one hand and risk on the other hand. Three sets of research questions were designed for exploratory research, one of which is considered in this article: What are the sources of knowledge involved in identifying risk, framing risk groups and ensuring that risk groups are reached? These questions were informed by policy document analysis and a series of collective interviews with frontline clinicians. The research was carried out from May 2012 to September 2013. In the case of the school-based substance use prevention project, the research aimed at analysing the strategies of front-line professionals to reach out to young people 'at risk' and the reception of these strategies on the side of the target groups. Research was informed by a collection of individual and collective interviews with project managers, front-line professionals and targeted students (2007-2009).

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