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Challenges to Personal Information Sharing in Interorganizational Settings: Learning from the Quebec Health Smart Card Project

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Abstract and keywords

DEPLOYMENTS of national health information infrastructures (NHII) are slowly spreading throughout the world. Because they span organizational boundaries and involve many parties with different strategic interests, they are considered interorganizational systems (IOS). The body of literature on IOS poses problems for the health care sector since the latter usually encompasses more types of stakeholders than the usual users and suppliers, its information systems contain sensitive information and it is not driven by profit. Moreover, the conventional MIS models have not been adapted quite yet to account for this more complex reality.

Studies about NHII infrastructures have offered fragmented results so far. In this research, I address this gap in the literature by examining what happened during the pre-implementation phase of the Quebec Health Smart Card project, a provincial health infrastructure project which lasted close to 15 years. In order to achieve this, I use Pierre Bourdieu's Theory of Practice and Bruno Latour's Actor-Network-Theory. These sociological methods allow me to investigate the process that unfolded over the years with a critical eye so that in addition to answering usual questions such as who participated, what their concerns were and how the debate took place, I am addressing questions such as why it happened that way.

The different perspective offered by these alternative theories provided good hindsight to refine resistance to change and user participation (MIS) models so that they reflect more accurately situations in interorganizational settings. Also, it fostered interesting thoughts about the similarities between private and public sector's information systems. Finally, it engendered three statements that can be applied to other situations and/or other sectors that share certain similarities with the case studied.

In addition to these benefits to MIS researchers, the present result can also help practitioners in managing the still ongoing provincial health infrastructure project, now renamed Quebec's Health Record. This is important since recent events proved that most issues and protagonists taking part in the controversy are the same as before, that the same history seems to be repeating.

Keywords: Information Systems, EHR, IOS, Health Sector, Resistance to Change, User Participation, Bourdieu, ANT.

"Do not follow where the path may lead.
Go instead where there is no path and leave a trail."

Ralph Waldo EMERSON

Pour Martin, Adrien et Léonie

Acknowledgments

THE last six years have been pretty busy to say the least. Three moves, one wedding, two kids, a new house, a new car, doctoral seminars, comprehensive examinations, teaching at HEC and, of course, this omnipresent thesis. This makes this opportunity to pause and thank the people who helped me achieve all of this all the more important.

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List of Abbreviations

AAPI	Association of the Access to and Protection of Information	Association sur l'accès et la protection de l'information
AETMIS	Quebec government agency responsible for health services and technology assessment	Agence d'évaluation des Technologies et des modes d'intervention en santé
AGIDD-SMQ	Association of Mental Health Rights Protection and Advocacy Groups	Association des groups d'intervention en défense de droits en santé mentale du Québec
AHQ	Quebec Hospital Association	Association des hôpitaux du Québec
ANQ	Quebec National Assembly	Assemblée nationale du Québec
ANT	Actor-Network-Theory	
AOQ	Quebec Optometrists Association	Association des optométristes du Québec
ARC-FACEF	The acronym of two Quebec consumers associations that merged together	Action réseau consommateurs – Fédération des associations coopératives d'économie familiale
BQ	Quebec Bar Association	Barreau du Québec
CAI	Access to Information Commission	Commission d'accès à l'information
CDPDJ	Human and Youth Rights Commission	Commission des droits de la personne et des droits de la jeunesse
CHST	Canada Health and Social Transfer	
CHUM	Montreal University Health Centre (the French one in opposition to the MUCH – the McGill University Health Centre)	Centre hospitalier universitaire de Montréal
CMQ	Quebec College of Physicians	Collège des médecins du Québec

CNQ	Quebec Chamber of (civil law) Notaries	Chambre des notaires du Québec
COOID	Duplessis Orphans Committee	Comité des orphelins et orphelines de Duplessis
COPHAN	Confederation of Quebec Organizations for Disabled Persons	Confédération des organismes de personnes handicapées du Québec
CPM	Council for the Protection of Sick People	Conseil pour la protection des maladies
CPP	Canada Pension Plan	
CPR	Computer-based (or Computerized) Patient Record	
CPS	Compendium of Pharmaceuticals and Specialties	
CpSQ	Quebec Health Card	Carte Santé Québec
CRCQ	Canadian Religious Conference (Quebec section)	Conférence religieuse canadienne (section du Québec)
CRM	Customer Relationship Management	
CSEC	Communications Security Establishment Canada	
CSQ	Quebec Group of Affiliated Trade Unions	Centrale des syndicats du Québec
CWS	Clinical Workstation	
DICOM	Digital Imaging and Communications in Medicine	
DPEi	Interoperable Electronic Health Record	Dossier patient électronique interopérable
DQ	Quebec Diabetes Association	Diabète Québec
DSC-CHUL	Community Health Department at Laval University Health Center	Département de santé communautaire, Centre hospitalier de l'Université Laval
DSQ	Quebec Health Record	Dossier Santé Québec
EHR	Electronic Health Record	
EI	Employment Insurance	
EMR	Electronic Medical Record	
ENAP	Public Administration University	École nationale d'ddministration publique
EPF	Electronic Patient File	
EPR	Electronic Patient Record	
FMOQ	Quebec General Practitioners Federation	Fédération des médecins omnipraticiens du Québec
FMRQ	Quebec Resident Doctors	Fédération des médecins

	Federation	résidents du Québec
FMSQ	Quebec Medical Specialists Federation	Fédération des médecins spécialistes du Québec
FTQ	Quebec Workers Federation	Fédération des travailleurs du Québec
GIRES	Integrated Resources Management	Gestion intégrée des ressources
HIS	Hospital Information System	
HL7	Health Level 7	
IC	Integrated Circuit	
IS	Information System	
IT	Information Technology	
MNA	Member of the National Assembly	
MOV	Measurable Organizational Value	
MSSS	Ministry of Health and Social Services	Ministère de la Santé et des Services sociaux
NCVHS	National Committee for Vital and Health Statistics	
NHII	National Health Information Infrastructure	
NPO	Non-Profit Organization	
OC	Consumer's Option	Option Consommateurs
OPQ	Quebec Order of Pharmacists	Ordre des pharmaciens du Québec
PACS	Picture Archiving and Communication System	
PC	Quebec Ombudsperson	Protecteur du Citoyen
PHR	Patient Health Record	
PIN	Personal Identification Number	
PKI	Public Key Infrastructure	
RAMQ	Quebec health insurance board	Régie de l'assurance maladie du Québec
RIS	Radiology Information System	
RTSS	Socio-sanitary telecommunication network	Réseau de télécommunication sociosanitaire
SI-PRSA	Computerized information system for the coordination of regional ambulatory care offer	Système d'information de la programmation régionale des services ambulatoires
ToP	Theory of Practice	

Preamble

IT was in May of 2004, right after my comprehensive exams, that I read in the *Le Soleil* newspaper that the Quebec Health Smart Card project was definitely dead and buried. The Quebec Health Smart Card, this sounded familiar; I remembered that there had been ongoing discussions about it the year preceding my departure for London, and that there had been a public hearing on the subject.

At this point, I needed a topic for my thesis and started to think that this might be an interesting example of user participation and resistance to change, two topics within the "IT/IS implementation" sphere, which is of great interest to me. Most of all, the story was located within the public health sector, a domain that I was eager to learn more about. I was also, I must admit, a bit shocked at the news that the project had been stopped since, at the time, I carried a strong bias towards information technology and it did not make sense to me that such "progress" could be dismissed so easily.

After being reassured that many documents related to the project were publicly available, I embarked on the journey towards a better understanding of why the Smart Card had been abandoned and made it my thesis topic.

Studying IT/IS implementation in the public health sector sounded great, but the question was: how to go about it? What is more, following my Ph.D. courses, I really wanted to look at more critical ways of doing research, and I was especially attracted by French theorists such as Pierre Bourdieu and Bruno Latour (I was quite possibly fairly pragmatic about it too, since this would allow me to read books in my native language for a while). Moreover, a critical lens is especially adequate for answering "why" type questions, and though my research questions were not articulated at that time per se, my basic interrogation was definitely of this category.

IT/IS implementation, public health sector, Bourdieu, Latour... still, why should a matter such as the Quebec Health Card project be the object of a doctoral dissertation? Vincent E. Giuliano of Arthur D. Little, Inc. was quoted in a 1975 *Business Week* article saying that: "[T]he use of paper in business for records and correspondence should be declining by 1980, and by 1990, most record-handling will be electronic." Although we are far from the complete paperless office envisioned by the author 33 years ago, it is true that an increasing number of records and correspondence are now handled electronically in businesses, at least in Western societies. Now in light of this, it is safe to postulate that printed medical records will also disappear sooner or later. This seems to be inevitable considering the call made by the United States Congress in July of 2005, when a representative made a plea for a nationwide shift to paperless medical record-keeping to the House of Representatives' Ways and Means Committee's Subcommittee on Health. More importantly for us, a similar recommendation had previously been made by the Royal Commission on the Future of Health Care in Canada, also known as the Romanow Report (Romanow 2002). Yet

the state of the matter today leaves us perplexed. Paper files still reign supreme over their electronic equivalents throughout both the American and Canadian health systems and as such, the challenge posed by the digitalization of electronic health records is not specific to the Province of Quebec.

IT/IS implementation, public health sector, Bourdieu, Latour, and a puzzling situation that transcends the local. The fit seemed good, the table was set. Now, four years (and two kids) later, my aim with this thesis is to convince you that these five elements, when associated, can further our knowledge about information systems management.

The Project at a Glance

In 2001, the Government of Quebec announced its intention of deploying what they called a Carte Santé Québec (CpSQ – Quebec Health Smart Card)[1] to replace the Health Insurance card that had been used since 1970. In addition to being an administrative card, the CpSQ would also provide access to a health summary. Whereas the previous sentences defined what the system was intended by the government, it was rather understood by most people as a card with a microprocessor that would contain their health record. I defer any clearer definition of the project to later since this misunderstanding around the IT/IS artifact is in a way responsible for

[1] Although the exact name of the project in French is Carte Santé Québec, the acronym CpSQ will be used throughout this thesis since CSQ refers to an important union in Quebec which, incidentally, participated in the public hearing considered for this research. The small 'p' will therefore stand for 'puce' which is the translation for the 'chip' that makes the card smart.

the unfolding of the events. For the moment, suffice to understand that the CpSQ was a governmental project that took the form of a pre-bill which was submitted to public consultation in 2002.

IT/IS Implementation

First, when attempting to map the Quebec Health Card project (CpSQ – Carte Santé Québec) to two popular implementation models, the multilevel resistance to IT implementation model presented by Lapointe and Rivard in 2004 and the emergent causal processes model of IS participation presented by Markus and Mao, also in 2004, I rapidly understood that both models – although they provided greater insights into the situation then their respective predecessors – still needed to be refined in order to account for how the CpSQ project unfolded. This is in large part due to a level of complexity rarely found in generally studied implementation projects: an interorganizational dimension.

For instance, in the multilevel resistance model, the interorganizational dimension acts as a multiplier of the variables found within the initial conditions or the model's object boxes, since each stakeholder has a distinct set. Although the model makes it possible to account for a great number of variables, it does not deal with parallelism very well, as it does not consider the possibility that two different sets of stakeholders may be dealing with different initial conditions and objects in their appraisal of the project at the same time. In such a situation, studying all the variables together (i.e., in the same pass of the process model) does not tell much, since we lose the

information about who does/feels what. However, studying them in different passes (i.e., iteratively), as suggested by the model, is not well-suited either. This is due to the fact that the interactions between the initial conditions and the object for one set of stakeholders are not necessarily triggered by the resistance or acceptance behaviour of another set; sometimes they simply occur at the same time. The model would thus benefit from a refinement in order to allow for this particularity.

As for the emergent causal processes model of IS participation, it is not well suited for depicting a situation where several stakeholders of the same type (e.g., users) are enrolled in participation activities of the same nature (based on their type, richness, methods and conditions), but end up with a totally opposite appreciation of the system development's "success" despite the similarities in their participation processes. The interorganizational dimension calls for an refinement of the model so as to encompass the greater level of complexity brought about by the presence of many more different stakeholders than what occurs in traditional IS participation theory.

Moreover, the thorough study of the CpSQ project leads to a larger epistemological problem than can be formulated with a simple question: Did the participation activity (i.e., the public hearing) give rise to demonstrations of resistance and acceptance or was it in itself a means of expressing resistance or acceptance? Put differently, is it possible to merge the two models in order to properly depict the Quebec Health Card project as it unfolded? If so, how? If not, which assumptions prevent us from doing so and why?

Public Health Sector

When analyzing the different briefs submitted to the government by the groups that participated in the public consultation, as well as the transcripts of all the protagonists' testimony, I realized that there were many key concerns that I had not foreseen in my literature review. Even now, references for many of these specific points are still non existent in the MIS literature. This is partially due to the fact that most of the published articles in our field are based on the private sector. In this thesis, I contend that the unique concerns voiced during the CpSQ project can contribute to a better understanding of MIS. I therefore critically assess some of the assumptions at the basis of MIS implementations in the private sector in light of the learning provided by the unfolding situation. Then, I perform the opposite exercise, taking some of the crucial concerns from the public sector and trying to find matching private sector situations so as to see if we are missing something. As the project is still on, although under a new form,[2] the results of this research will be important for practitioners (in this case, mostly government officials and health professionals) who will be making important decisions in the near future.

Methodology

I already mentioned that the theoretical lenses of Pierre Bourdieu and Bruno Latour are used extensively throughout this dissertation. Applications of Pierre Bourdieu's theory of practice (ToP) are still rare in the business field, even though papers such as

[2] The Quebec Health Record's (DSQ – Dossier Santé Québec) first pilot scheme was launched in the summer of 2008 and the same pro and con arguments are being heard, even if the smart card technology has been abandoned.

Everett (2001), Holt (1998), Corsun and Costen (2001), Oakes and colleagues (1998), and Levina and Vaast (2005) have successfully applied it in accounting, marketing, human resources, general management, and information systems, respectively. Often in these articles, Bourdieu's theory was complemented by others in order to fully account for the situation under scrutiny. Social Process theory (Harvey 1996), Mythologies (Barthes 1972), Critical Hermeneutics (Phillips and Brown 1993), Social Class theory (Warner 1960), Grounded theory (Glaser and Strauss 1967; Strauss and Corbin 2007) are examples of theories used by the above authors to further their analyses.

For this thesis, I chose to complement Bourdieu's theory of practice with Bruno Latour's actor-network-theory (ANT). This allowed me to make sense of my corpus in a very methodical manner without having to borrow tools such as semiotic, hermeneutic, rhetoric or pragmatism from the discourse analysis box. Within the IS discipline as well as in general business literature, applications of ANT are more common than those of ToP. In 1997, Walsham presented a paper at the international conference on information systems and qualitative research (IFIP TC8 WG 8.2) where he assessed the then current and potential contribution of ANT to IS research. One of his major critiques was that ANT paid little attention to broad social structures. He then suggested that ANT be combined with Giddens' structuration theory, something he himself did for a later study published in *MISQ* (Walsham and Sahay 1999). I believe that Bourdieu's ToP can portray the broad social structures in a more methodical way than Giddens' structuration theory and this is why I chose the former over the latter. Consequently, the juxtaposition of Bourdieu's theory of

practice and Latour's actor-network-theory in order to make sense of a particular implementation situation is an additional contribution to our discipline.

Research Questions

The use of critical lenses calls for research questions that are not too precise in nature, and above all not biased. Terms such as success, failure, good and bad must be avoided in order to give place to a more neutral appreciation of the situation. Accordingly, the three research questions guiding this research are:

How did the process of initiating a Health Smart Card unfold in Quebec?

Why did the project unfold as it did?

What can we learn from this situation in relation to behaviour towards change, the outcome of participation activities and more broadly, the implementation of interorganizational systems containing personal and sensitive information?

Organization of the Research

The organization of this thesis is somewhat different from the usual structure of a doctoral dissertation. This is essentially due to the theoretical lenses used to examine the situation. In order to apply them correctly, I had to move away from IS for a

considerable part of the thesis (Section II). I would encourage the reader to bear with me during this journey; keeping in mind that it is done with the aim of refining our understanding of IS, to which we will safely return in Section III. But first, Section I reviews the literature that shapes our understanding of the situation and introduces Bourdieu's Theory of Practice and Latour's Actor-Network-Theory.

About the Project's Scope

[rē-flek-si-və-tē] 1[3]

At this point, I believe it is important to reflect back on the scope of this project, and most of all, on how it changed along the journey. At first, my goal was clearly to study the Health Smart Card project. I originally intended to cover events that occurred between 2001, when the first brief was submitted to the Cabinet by the Health Minister, and 2004, when the termination of the project was publicly announced. These boundaries were clearly stated in my first proposal title: *The Public Hearing on Quebec's Health Card: An Opportunity to Study Resistance to Change and User Involvement in an Interorganizational Setting*. I really though having fixed boundaries would make everything simpler considering that I wanted to finish that thesis one day and that there were so many stories about doctoral students undertaking projects way too big in scope, and consequently never graduating.

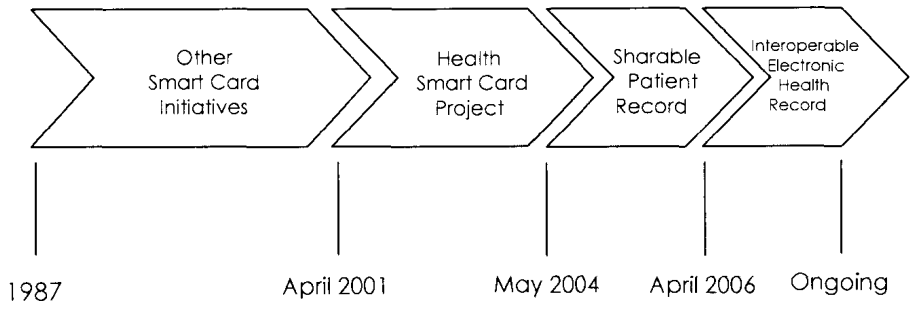
Two separate events motivated the thesis title to be modified. The first one is a presentation I made of my project to some colleagues at HEC. They commented that my title should reflect something larger than the project itself, something that conveyed a stronger sense of the generalizations I

[3] For more information about reflexivity sections, see p. 128 of this thesis.

would be able to make from my learning. I also received similar comments from my supervisory committee on my first proposal draft. They argued that my project's title should be more reflective of the phenomenon at large. This is where the health infrastructure concept appeared in both my title and research questions and it stayed there until after proposal defence. Did that title modification had an effect on the actual scope of this dissertation? Not at first, since I was still basically interested with the Health Smart Card project. However, it became clear when I started to apply more thoroughly Bourdieu and Latour methodologies that I could not really disregard what had happened both before and after this time frame if I wanted to properly understand trajectories (Bourdieu) and mediators (Latour). What is more, there were many references to the previous smart card deployment attempts in my corpus. Does this mean this dissertation is about health infrastructure more generally? Again no and I therefore do not believe that the scope of the thesis changed, simply that the additional information about the origin and the follow-up of the project helped me better assess what was happening in the Health Smart Card controversy. As Latour (2005, pp. 183-4) mentions himself:

> The problem is that social scientists use scale as one of the many variables they need to set up before doing the study, whereas scale is what actors achieve by scaling, spacing, and contextualizing each other through the transportation in some specific vehicles of some specific traces. It is of little use to respect the actors' achievements if in the end we deny them one of their most important privileges, namely that they are the ones defining relative scale.

Within their discourses, because of the word they choose and the links they make, it is the actors of the health smart card controversy who are defining the object of study. For the sake of clarity, here is a graphic representation of the timeline reflecting the changes in terminology used by the government.



Section I

What is being studied?

How is that being studied?

Introduction to section I

THE present thesis aims at studying the multiple arguments that were voiced in resistance (or in support) to the (pre-)implementation of a technology (the smart card) used to access an information system (the electronic health record) which is interorganizational by nature, hence involving many users (stakeholders), all of this within the Quebec (publicly funded) health care system.

As such, it is the literature about these topics that is reviewed in chapter two. But on top of identifying what is being studied, it is important to know how it is being studied, i.e., through which lenses the notions constituting the "what" will be scrutinized. As mentioned before, two sociological theories are used to make sense of the situation under study. Chapter three is devoted to Pierre Bourdieu's Theory of Practice while chapter four provides an overview of Bruno Latour's Actor-Network-Theory. In chapter five, the two theories are then compared, contrasted and reconciled. Finally, chapter six introduces the methodology and research approaches used to realize this research.

Literature Review

CHAPTER TWO

THIS chapter reviews the literature that informed this research endeavour. The first section presents Quebec's health care system in order to contextualize Quebec's Health Smart Card project. The second section describes the evolution of IS in the health sector and covers in greater details significant literature on the "resource" (health care data), the "system" (the electronic health record) and one "technology" (the smart card) at the basis of this research. Then in the third section, the MIS theoretical concepts that led my quest for answers to the research questions are introduced.

Quebec's Health Care System

The Canadian health system being public, it differs in many points from its American counterpart which is mostly private. In order to help the reader seize the peculiarities of such a structure, this section presents Quebec's health care system along its three poles: legislative, administrative and political.

The Legislative Pole

The Quebec health and social services system takes root in a federal law: the Canada Health Act. This legislation establishes the conditions a health care insurance plan must satisfy in order for the province to qualify for its full share of federal transfers under the Canada Health and Social Transfer (CHST) program. Those conditions or principles are public administration, comprehensiveness, universality, portability and accessibility (Government of Canada 1984).

The first principle, public administration, assures that each health system throughout the country is carried out on a non-profit basis by a public authority overseen by a provincial government. The comprehensiveness principle determines that residents are insured for all medically necessary services provided by hospitals and doctors while the universality principle guarantees that all insured persons in the province or territory (admissible residents) are entitled to public health insurance coverage on uniform terms and conditions. Finally, the principle of portability establishes that coverage for insured services are maintained when an insured person moves or travels within Canada or travels outside the country whereas the principle of accessibility ascertains that reasonable access to medically necessary hospital and physician services are not constrained by financial or other barriers for every insured person (Government of Canada 1984).

When all five principles are respected, provincial governments are eligible to the full federal transfer payments. This transfer consists of a combination of cash and fiscal contributions. A "fiscal transfer" or "tax transfer" is a number of income tax points

the federal government transfers to a provincial government. In other words, the federal government reduces its income tax rate on particular groups and societies so that provincial governments can manage these tax areas and hence increase their own income tax by a number of points equal to the federal reduction (Government of Canada 1984).

The Administrative Pole

The organization and administration of the health care system in Quebec falls to the provincial government, which must define its scope, finance service production and implementation, and determine equitable conditions of access. Quebec's health and social service system is characterised by the integration of health and social services within the same administration which is divided into three levels: central, regional and local. At the central level, the Ministère de la Santé et des Services sociaux (MSSS – Ministry of Health and Social Services) establishes overall orientations and allocates budgetary resources. At the regional level, health and social services agencies are charged with regional planning, resource management and budget allocation to institutions. At the local level, organizations such as the health and social services centres, hospitals and rehabilitation centres provide different health services to the population. Specialized services, organized regionally, and overspecialized services, organized provincially, complete the health network (Bédard 2000).

The Political Pole

Because the federal government is responsible for setting and administering national principles for the health care system through the Canada Health Act, it must also make sure that a publicly-funded health system can be sustained over time. In order to achieve this, special commissions are held periodically, where different recommendations about how to balance investments in prevention and health maintenance with those directed to care and treatment are offered. The most recent commission on the future of health care in Canada was held by Roy Romanow in 2002. One of its recommendations was that in building Canada's health infrastructure, government should encourage the creation of "[a] personal electronic health record for each Canadian that builds upon the work currently underway in provinces and territories" (Romanow 2002, p. 76). In other words, the federal government proposed nothing less than the construction of a mega database that would link several provincial databases containing electronic health records.

In order to better contextualize this research, Quebec's health care structure was briefly described. The public aspect of the system is crucial in the unfolding of the Quebec Health Smart Card project as it is generally accepted that bureaucracy slows decision processes and makes things more cumbersome. Also, the structure requires that individuals from different organizations are involved in most decision-making processes. Projects thus become interorganizational, which differs from the usual individual or organizational adoption/implementation projects found in the MIS literature.

IS in Health Care

The use of technology in health care is not new although it is widely recognized that this sector has lagged other industries in adopting information technologies (Kilman and Forslund 1997). It appears the health sector also lags other industries in its representation in the MIS literature (Chiasson and Davidson 2004). A large part of this section is therefore built around the literature found in either books or health informatics journals.

According to Anderson and Jay (1984), there are two types of medical innovation: clinical and organizational. In the last fifty years, hospitals have seen both types of innovation occur in medical informatics. For instance one of the first developed health care systems, hospital information systems (HIS), provides order-entry and results-reporting functionality, as well as means of communication (Heathfield, *et al.* 1999). These systems support activities such as accounting, payroll, drug inventory and patient data management to name but a few, helping health care workers perform their everyday functions. Later on came radiology information systems (RIS), helping employees to better schedule appointments while also supplying administrative data about patients' imaging test histories without divulging clinical information. Hence these early HIS and RIS are clearly organizational innovations using non-strategic applications mostly based on information processing and suited to well-structured situations and operational tasks (Raghupathi and Tan 2002). On the other hand, today's hospitals frequently use systems such as drug interaction programs, obviously a clinical innovation since it directly improves the patient's health (M.-C. Trudel 2001a). But newer HIS and RIS have gone beyond that point these days to encompass

both non-strategic/organizational and strategic/clinical applications in order to help health care professionals with ad hoc or less structured decision tasks such as diagnosing and choosing a patient treatment, or to record clinical information. The same can be said about systems such as the picture archiving and communication system (PACS) and the information system at the heart of this research, the electronic health record, since they both facilitate data management and improve diagnoses.

Because these systems contain data which are directly related to identifiable individuals and include information about illnesses and treatments, they have become a lot more sensitive compared to the traditional administrative data of the early days (Katsikas 2000). Yet at the same time, with the growing popularity of networks, health care professionals are now seeing the benefits of sharing this sensitive information in order to make better decisions and therefore help improve their overall efficiency, adding to the concern for confidentiality and privacy.

Health Care Data

Health care data are complex because they are multifaceted. In 2001, the National Committee for Vital and Health Statistics in the United States (NCVHS) defined health care data along three overlapping dimensions: the health care provider dimension, the personal health dimension and the population health dimension.

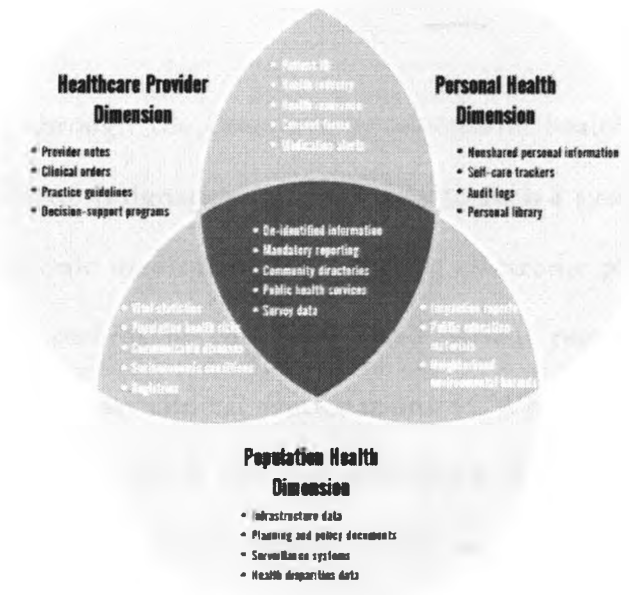


Figure 1 – The three dimensions of health care data (NCVHS 2001)

The health care provider dimension encompasses information exclusive to the provider of health services whereas the personal health dimension contains information exclusive to individuals eager to better manage their own wellness and health care decision making. The population health dimension consists of information exclusive to health officials. Finally, overlapping areas contain information shared by more than one instance (provider, individual or health officials). Examples of content for the three dimensions and their overlap are depicted in Figure 1.

Electronic Health Record

The task of sifting through the literature on electronic health records is not easy considering the different designations authors give to such a system: electronic health records (EHR), electronic medical records (EMR), electronic patient records (EPR), computerized patient records or computer-based patient records (CPR), electronic patient files (EPF), or even clinical workstations (CWS). Whereas many authors consider these synonyms, Stead and his colleagues distinguished three of them, electronic medical record, electronic health record, and patient health record (PHR) on the basis of the health care dimensions presented above (Stead, *et al.* 2005). They define an EMR system as one automating clinical and administrative aspects of medical practice. The records are constructed with specific terminology and data structures so that they can live uniquely within the specific system that created them. In contrast, a PHR system refers to a personal electronic collection of health information filled by individuals hence allowing them to take a more active role in their health care (e.g., https://www.vitalogs.com/index/home). Finally, an EHR system is a superset of all EMR and a variety of personal information sources (Stead, *et al.* 2005). The graphic they use to illustrate their typology is presented in Figure 2.

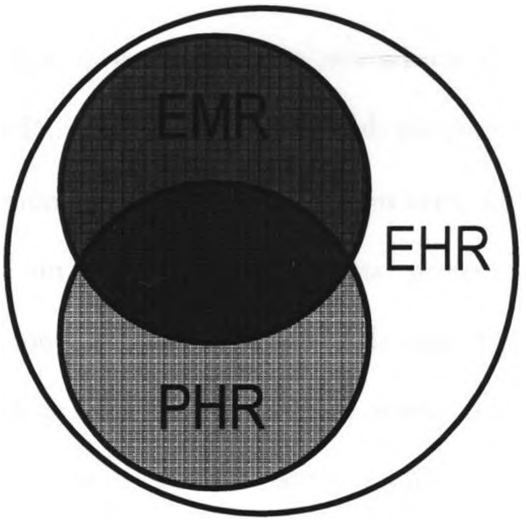


Figure 2 – Inter-relations among EHR, EMR and PHR (Stead, *et al.* 2005).

The scientific literature on EPR is fragmented and covers issues such as the influence of successful implementation of EPR (Dansky, *et al.* 1999), EPR assessment (Tallon 1996; Heathfield, *et al.* 1999), EPR confidentiality (Sadan 2001) and security issues (van der Haak, *et al.* 2003; Ruotsalainen 2004) to name but a few. However, both the system referred to by Mr. Romanow in his report and the one envisioned by Quebec's government has to serve an entire province and/or country and therefore seems closer to an EHR (R. Trudel 2001b; Romanow 2002).

Articles on EHR systems are a lot less common in the literature. These articles cover the distributed sharing of patient data across organizational barriers (Safran and Goldberg 2000), collaboration based virtual patient records (Kilman and Forslund 1997), sharable patient files (Paré and Sicotte 2004), users' attitudes to implementation (Scott, *et al.* 2005), and success factors for developing a community health information network (Ferrat, *et al.* 1996). In these papers, the collaboration has occurred mainly in

the United States between several organizations which are either members of the same system (i.e. Kaiser Permanente in Scott, *et al.* 2005) or competing hospitals in a particular geographic region (i.e. the greater Dayton area, Ohio in Ferrat, *et al.* 1996). Few articles were found on the genuinely national project of the United Kingdom (Pouloudi and Whitley 1997; Introna and Pouloudi 1999; Hendy, *et al.* 2005), on the more regional Norwegian project (Hanseth, *et al.* 2006) and on the planned National Health Information Infrastructure (NHII) in the United States (Halamka, *et al.* 2005; Stead, *et al.* 2005). They highlight issues such as privacy (Introna and Pouloudi 1999), the absence of the patient in the debate (Pouloudi and Whitley 1997; Introna and Pouloudi 1999), the lack of consultation and communication processes (Hendy, *et al.* 2005), standards (Stead, *et al.* 2005), governance (Halamka, *et al.* 2005), architecture and data interchange capability (Halamka, *et al.* 2005; Stead, *et al.* 2005) and the services to be included (Halamka, *et al.* 2005). Several of these topics will covered in more details later in this chapter.

Canadian Initiatives

Many efforts have been deployed throughout Canada to launch province-wide electronic health records. So far, Alberta has taken the lead. Their project's development started in 1997 and they implemented the Alberta Electronic Health Record (Alberta EHR) in October of 2003. At this time, Alberta's system was fairly basic and simply contained information about prescription history, allergies, and

laboratory test results[4]. The system renamed Alberta Netcare EHR in 2005 is now holding patients demographics, drug information, lab data, diagnostic imaging reports, and other transcribed reports like physician progress notes, admissions, histories, discharge summaries, initial consultations, letters, and operative procedure reports. There are many regional variations in the accessible categories as well as in how far back certain specific categories of data are available.

Other provinces had ongoing EHR projects in the early 2000. Many of these, when they were initiated (not deployed) were more elaborate than the Albertan one at its inception since they were expected to contain clinical data about diseases contracted by and treatments provided to patients, on top of prescription history, allergies and laboratory test results. To this day, the Albertan system seems to be far ahead of the others and yet, it was implemented with incremental releases over five years. It is important to mention that Quebec's project was the only one that intended to use smart card technology, which added to its complexity. To my knowledge, Quebec was also the only province that submitted its project to public consultation, making it the best documented project for this research.

Quebec's project started with two pilot schemes on the use of smart cards for managing health care information. The first one was launched in 1993 in eastern Quebec and ended in March 1995. It was evaluated by the Régie de l'assurance maladie du Québec (RAMQ – Quebec Health Insurance Board) in a 1995 report (RAMQ 1995). The second pilot scheme started in October 1999 in one of Montreal's suburban area and lasted for about two years. The evaluation of this project was reported in Sicotte

[4] http://www.albertanetcare.ca/

(2002a). Meanwhile, the main province-wide project was first presented as a pre-bill in 2001 and submitted to a public hearing in 2002. It was an administrative card that would have replaced the actual RAMQ card that every patient has to prove admissibility to Quebec's health insurance plan. Beyond its administrative component, the card would have also contained clinical information about the card holder on a voluntary basis.

After the end of the public hearings, a new Premier (from a different party) was elected in Quebec and one of the first things he did was to rename the actual "Health Smart Card" project to "Interoperable Electronic Health Record,"[5] hence removing the focus from the technology (i.e., the smart card) and putting it instead on the information system at the basis of the project. Today, the Quebec project is still in development now under the name "Quebec Health Record."[6] A pilot scheme for this new version started in the Quebec City area in Spring of 2008.

The Smart Card Technology

An EHR may or may not be placed on a medium such as a smart card. A smart card is a wallet-size plastic card containing a silicon integrated circuit (IC) chip which encloses a micro-processor, digital memory or both. The first patents for "a chip on a card" were obtained in France by Roland Moreno in 1974. At the time, it had a memory size of 8K. Despite this low capacity, smart cards rapidly gained in

[5] Dossier patient électronique interopérable
[6] Dossier santé Québec

popularity in France as micro payment cards (virtually replacing coins for public phones and parking meters for instance) and credit cards (Mackay and Trudel 1992).

Smart cards can be considered payment vehicles, a usage commonly referred to as electronic cash or purse; access keys, allowing access to buildings, computer centres, computers, networks, software programs or websites; information managers, increasing data portability; marketing tools, enhancing the "collectible" aspect of the cards; and customized delivery systems, containing the equivalent of the cookies stored in most computers nowadays (Allen and Kutler 1997).

Many of the applications listed above can technically be conducted with a traditional magnetic swipe card (aka magnetic stripe card), the standard adopted by the bank credit card industry in the 1970's. Such cards have on their reverse side a magnetic strip that can hold two or three tracks of basic data, usually the holder's name, account number and expiration date. The format for all three tracks are based on international standard ISO-7811 (Madan and Reid 1992).

Smart cards have many advantages over magnetic swipe cards. First, they have an increasingly high data capacity (Allen and Kutler 1997). Consequently when used as an electronic purse, the smart card memory is large enough to hold the personal identification number (PIN) of the card user allowing the micro-processor to directly authenticate the user. The card can also contain the amount of money left such that the micro-processor can automatically debit it when a purchase is made. Also when used as an access key, smart cards can contain biometric information in addition to

other identification data. Second, all of the above operations can be done autonomously without having to connect to a central database; the data is processed on-card. This facilitates the administrative process between the emitting party and the user: the communication process is improved, the queues are shortened and the data are more easily accessible (Mackay and Trudel 1992). Third, chips are more durable than magnetic bands which degrade through friction (Allen and Kutler 1997). Finally, the most significant advantage of smart cards over magnetic swipe cards is their higher level of security (Mackay and Trudel 1992; Madan and Reid 1992; Allen and Barr 1997). This is because in addition to the integrated PIN and the biometric information already mentioned above, smart cards are more difficult to alter and to replicate than are magnetic cards and they contain built-in encryption technologies that render transmission and storage more secure.

The literature also presents several important issues with the use of smart cards on a regular basis. For one, the improved security features of the smart cards have a downside: the encryption algorithms they contain are based on keys. As such, ownership and rights management power must be carefully defined in order to delineate the level of access of the emitting party to the public key. A second problem is that because the card is a standalone system, losing it amounts to losing the data on it as well. Cost is a third issue. Smart cards are more expensive to produce than are magnetic swipe cards and the former also require completely different terminals, thus adding to the expense. Finally, the normalization of the integrated circuit becomes a fourth issue since many smart cards will need to interface with personal computers

and it will be cumbersome to have a different drive for each card used (Mackay and Trudel 1992).

A health smart card is used to manage health information. It can take the form of a simple access key to a remote central database, a data repository containing the complete medical and/or insurance records, or a hybrid medium holding emergency medical data as well as secure gates to more detailed or high volume information such as surgical procedure narratives or radiological images (Brainerd and Tarbox 1997).

Compared to a traditional paper-based patient record, any type of smart card-based record is more secure since both the areas searched and the mode of access are tailored to the type of professional using it (Aubert and Hamel 2001), hence preventing unauthorized behaviour from non-treating health professionals. A health smart card also offers a way to consolidate all information concerning a single patient, information usually spread over many clinics and hospitals (Brainerd and Tarbox 1997). Smart card technology has been used in the health sector for some time now mostly within large organizations, managing the workflow of a simple patient-record between departments. So far, the integration on a single card of multiple records distributed across organizations has not been achieved.

According to Lambrinoudakis and Gritzalis (2000), a smart card-based health insurance information system would contribute to health and insurance organizations by modernizing their organizational and operational sectors, reducing their operational expenses, improving the quality of the provided services, implementing

secure ways of authenticating the patient's identity, developing a portable patient record and deploying secure access to it, developing a standardized codification for storing, transporting and exchanging patient information in a secure way and finally, developing the necessary infrastructure for flexible co-operation and information exchange between the members of the health care and insurance community. These contributions would be effective as long as interchangeability, open architecture and shared access can be managed properly, (Brainerd and Tarbox 1997; Lambrinoudakis and Gritzalis 2000).

Quebec's Vision

According to the pre-bill presented in 2001, Quebec's health smart card was to contain authentication data, insurance admissibility data and a health summary. This summary would have been composed of information about identity, allergies, vaccination, confirmed diagnoses, medication, medical and surgical antecedents, laboratory and imaging results, blood group and transfusion history, prostheses and implants, pacemakers, and organ donation. The pre-bill also stipulated that any other information type to be recorded on the card would have to be determined by a government regulation. In fact, it seems that any change made to the project would have had to be done through a government regulation. Those changes would have been publicly known then but they would have neither been submitted to public scrutiny nor would they have been debated (R. Trudel 2001b).

In order for the system to work properly, the health smart card was to be paired with an ability card (also called access or authorization card) delivered to health professionals such as physicians, pharmacists, and nurses. It would not have been possible to access information about a patient smart card without first establishing the necessary authorization to do so with the ability card. Health professionals would have been granted access only to the patient information they were allowed to see, considering their profile in the system (R. Trudel 2001b).

Whereas it would have been mandatory for everyone living in Quebec to have a health smart card in order to prove their identity and coverage, anyone could have refused to have his/her health summary inscribed on it, without losing the right to be treated in any health organization. Also, this health summary would have been a complement, not a substitute, for the medical records filed by a doctor or a hospital (R. Trudel 2001b).

On April 25 of 2006, Quebec's Health Minister announced that his government had decided to go forward with deploying the Dossier Patient Électronique interopérable (DPEi – Interoperable Electronic Health Record) and he presented a provincial health information infrastructure no longer using smart cards (as it had been decided in 2004) but now using a name aligned with the federal initiative put forward by Canada Infoway. On a voluntary basis, people living in Quebec would allow their physicians and pharmacists to access their record. This electronic file would contain patient identifiers, emergency contacts, allergies and intolerances, prescribed drugs, immunization information, laboratory results, and the list of consulted medical

professionals. The electronic file at that point was not supposed to contain any data about diagnoses, not even a summary.

In this section, the IT artifact at the basis of this research was presented and the general area of study, health information systems, was gradually introduced. Each following section narrowed the field and the literature about electronic health records, smart cards, and health smart cards was presented. Finally, specifications about Quebec's project were described, offering elements of answers to the general question: How did the process of initiating a provincial health information infrastructure unfold in Quebec? The following sections will now turn to the other literature that will inform our research and enable us to answer our research questions.

Debated Issues

When I first wrote this chapter, I had not read the briefs or the public hearing verbatim. Therefore the list of issues covered here mainly came from the few articles found on the creation of national health information infrastructures in other countries, and from skimming press releases and newspaper articles about Quebec's project. Because the few additional and non-covered issues were discussed in more details within the analysis chapters, they were not added in the present section.

Ethics and Privacy Issues

The number one issue that stems from both the literature about EHR systems and the media coverage of Quebec's Health Smart Card project is related to ethics and privacy. This section first presents philosophical perspectives on ethics as well as corresponding theories of ethics found in both the general business and the MIS literature. The notion of privacy is then introduced along with relevant literature on that topic. Finally, the different laws that are implied in the CpSQ project will be presented.

Philosophical Perspectives on Ethics

The word *ethics* is derived from the Greek word *ethos*, and refers to a person's orientation toward life. In its simplest form, ethics is a set of principles determining what is right and what is wrong. Yet ethics is not as universal as one may think although there exists a *universalist* perspective which accounts for only one amongst several philosophical ethics theories. Based on the philosophy of Immanuel Kant, universalist ethical theories maintain that the inherent features of an action make it right or wrong. Thus according to Kant, being ethical or moral is to behave such that everyone could be commanded, in every circumstance, to behave like we currently do (Cresson 1963). Kant's perspective is sometimes referred to as deontological ethics. Two other philosophical ethical perspectives particularly helpful for information and computer professionals are the *consequentialist* perspective based on John Stuart Mills and Jeremy Bentham and the *theories of just society* based on the precepts of John

Rawls (Kling 1996, p. 853). Consequentialist ethics theories focus on the outcomes of actions rather than on a person's intentions, they are also known as utilitarian views. Theories of just society, on their part, examine the nature of social arrangements rather than individual acts.

The quest for the greatest net good of consequentialists does not prevent some people from losing as a consequence of actions undertaken. For instance in business, *stockholder theory* holds that the sole goal is to maximize profits and that this can be done in many ways, as long as actions are in conformity with laws and regulations and fraud and deception are avoided. *Stakeholder theory* somewhat broadens this utilitarian view so that customers, suppliers, and employees are added to the equation. The preferred option to maximize profits then must not violate the rights of those parties and the right conduct must be chosen from amongst the remaining options, balancing the interests of all the stakeholders (Smith and Hasnas 1999). *Social contract theory* is even more inclusive and brings all members of society into the equation. As such, it resembles more a theory of just society.

Computer ethics is defined as "the analysis of the nature and social impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such technology" (Moor 1985, p. 266).

Because information represents a source of power, an information system becomes a political instrument which may generate conflicts of social values. Therefore, proposals for a system design often assume that certain social goods should be

maximized compared to others. Unlike Smith and Hasnas' theories which are cumulative, Kling's (1978) ethics theories are based upon five value orientations: the *private enterprises* which consider profitability above all, the *statists* who view the strength and efficiency of governments as the highest goal, the *libertarians* who consider that civil liberties are to be maximized in any social choice, the *neopopulists* who maintain that the emphasis should always be on the common man and the *systemists*, whose main goal is to achieve an efficient, reliable and æsthetically pleasing system (Kling 1978).

Considering the diversity of philosophical bases or value perspectives of individuals, professions have adopted ethical codes or codes of conduct, a set of commitments expressed as rules and ideals that clarify and formally state the ethics requirements that are important to the profession (R. E. Anderson, *et al.* 1993). An important function of a code of ethics is to hold the profession accountable to the public. Consequently, most people trust physicians, lawyers and engineers who are not only aware of their moral responsibilities but have those stipulated in written form. Over the years, professional codes proved to be very difficult to enforce yet even though only a small fraction of abuses by doctors and lawyers end up penalized by their professional associations, people are still more confident with these standards weakly enforced rather than with no codes or professional enforcement at all (Kling 1996, p. 855). Amongst MIS professionals, there exist several codes of ethics devised by multiple organizations. In 1992, Oz conducted a study aimed at comparing the principles of five codes: three from the United States as well as Canadian and British ones (Oz 1992; 1993). Mainly, Oz observed that many differences existed between the

different codes with regard to obligations to society, employer, clients, colleagues and professional organizations (Oz 1992). A bigger problem resides in the fact that no priorities among the subjects of moral obligations are stipulated. In case an obligation to one subject goes against the obligation to another one, computer professionals do not know whose interests to privilege, unlike a lawyer, a physician or an architect who must always put the client/patient first.

The only portions of the above mentioned professional codes that are directly linked to computing are the ones relative to maintaining the privacy of data. Incidentally, this is also one of the biggest concerns of the public in relation to IS ethics, in direct relation to the increasing use of databases. In fact nowadays, the extent of what can be done with our personal information escapes us almost entirely. Clarke refers to it as *dataveillance*, "the systematic use of personal data systems in the investigation or monitoring of the actions or communications of one or more persons" (Clarke 1989, p. 498). Poster, borrowing from Foucault, talks instead about a Superpanopticon, where the keeping of files extends the capacity of one-way and total surveillance to an all new level (Poster 1990). Given that for the sake of speed and accuracy, databases are made of digitally encoded information which incurs an important loss of data compared to analog encoded information, the resulting files which form the basis of databases and reconstitute us as individuals are extremely tenuous (Nolan 1974). The language used in databases is therefore an "impoverished, limited language, one that uses the norm to constitute individuals and define deviants" (Poster 1990b, p. 95). For many, the thought that such information is the basis for governmental/societal decisions becomes an uncanny reminder of "Big Brother" (Orwell 1949) and thus they

need to be reassured that adequate ethical codes and privacy laws exist to first control the system design and later regulate information usages.

In 1986, Mason defined four ethical issues as the main ones to be dealt with by the MIS community for the years to come. These were privacy, accuracy, property and accessibility (Mason 1986). As mentioned in the introduction, detractors of the health card project were mostly concerned with privacy and confidentiality issues. These concepts will therefore be further examined in the following section.

The Notions of Privacy and Confidentiality

There seem to be as many definitions of privacy as there are authors writing on the subject. As early as 1890, Warren and Brandeis defined the notion of privacy as the right to be let alone (Warren and Brandeis 1890). Later, Gross defined it as the condition of human life in which acquaintance with a person or with affairs of his life which are personal to him is limited (Gross 1967). Westin considered it to be the claim of individuals, groups or institutions to determine for themselves when, how and to what extent information about them is communicated to others (Westin 1967). For Fried, privacy meant control over knowledge about oneself (Fried 1968) while it meant the exclusive access of a person to a realm of his own for Van Den Haag (1971), and control over when and by whom various aspects of us could be sensed by others for Parker (1974). More recently, data privacy was defined as the right to informational self-determination over data about oneself (Wacks 1996) and

information privacy was defined as the ability of an individual to control the access that others have to personal information (Culnan and Armstrong 1999).

Many of the definitions presented above are very similar in nature though they use different wordings. Whereas the oldest definition seems too limited now that we are not simply cautious about our physical privacy, the others are all somewhat tautological considering that we first need to agree on what is private or personal in order to control it or determine access to it. That, in turn, is dynamic since it is something that is socially and culturally defined (Johnson 1989; Bailey and Caidi 2005). According to Johnson (1989), the only common feature amongst all examples of "private concerns" is that it should be immune from the judgement of others. Hence, when we become conscious that some elements of information could be misinterpreted by people having different norms and values or by people unaware of the original context, we may be inclined to hide them.

Things get even more complicated when we add to the equation the fact that "others" have rights and that sometimes, transparency of information must prevail over privacy. As written by Introna and Pouloudi, "there is a thin line between the need to disclose information for the benefit of some individuals and the need to safeguard the privacy of some individuals by not disclosing this information" (Introna and Pouloudi 1999, p. 27). In the business and IS literature, information privacy is mostly studied by researchers interested in the commercial development of the World Wide Web (e.g. Hoffman, *et al.* 1999; Pollach 2005), in customer relationship management (CRM) or direct marketing applications (e.g. Culnan 1993; Winer 2001), or in global

information management (e.g. Ives and Jarvenpaa 1991; Milberg, *et al.* 2000). Issues related to privacy mentioned in this literature concern environmental control and secondary use of information control (Goodwin 1991), anonymity (Hoffman, *et al.* 1999; Marx 1999), attitudes towards secondary use of information (Culnan 1993), regulatory approaches to privacy (Milberg, *et al.* 1995; Milberg, *et al.* 2000; Smith 2001), and informed consent (Pollach 2005).

Interestingly, articles about privacy found within the medical informatics literature seem to define the notion differently. In an article entitled *Privacy, Confidentiality, and Electronic Medical Records,* the authors present safeguards to ensure the privacy of patients and the confidentiality of health care data (Barrows and Clayton 1996). Measures such as user authentication and access control, cryptography, data integrity, firewalls, reliability, redundancy and system backups and audit trails are identified as appropriate to offer "more security than traditional paper-record system" (Barrows and Clayton 1996, p. 139). In this article, there seems to be some conflation of privacy, confidentiality and security. Whereas the semantic cluster of confidentiality is subsumed within the larger semantic cluster of privacy (what differentiates the two words is mainly the dimension of retreat, shelter, seclusion, isolation and solitude found in privacy but not is confidentiality), the semantic cluster of security is totally distinct[7].

The very optimistic view of Barrows and Clayton contrasts with the rather negative stance of Cushman (1997) towards the same concept. He considers that although the

[7] Semantic representations of words can be examined using the engine built by the ISC team and found at http://dico.isc.cnrs.fr/dico/tr/search_en

safeguards listed by Barrows and Clayton exist, being mostly used in the banking and military industries, experience is totally lacking about the transferability and effectiveness of these security measures for the health environment. Also, Cushman is sceptical about the ability of security features to assure privacy. Barrows and Clayton argue that contrary to the military where a strict "need-to-know" access control model is in used, a matrix granting privileges to categories of workers paired with a "need-to-show" access control model should be used in health care environment, in anticipation of emergency situations (Barrows and Clayton 1996). According to Cushman, audit trails, which are the security measures envisioned to alleviate this problem, are so voluminous that they must be analyzed with computer programs. Yet statistical techniques within these programs are able to detect anomaly but are inadequate in detecting the intrusion of users who either have the right "group" privileges, or even worse, users who would have trained their profile gradually in order to conceal their anomalous access (Cushman 1997). Therefore, it is mostly against the misuse of health care data that security measures are insufficient.

Now that I have presented the literature about privacy in both the business field and the medical informatics area, the legislative context of the CpSQ project will now be briefly examined.

Relevant Legislation for this Research

There are many laws concerned with the protection of personal information in Canada. The most important is probably the Personal Information Protection and Electronic Documents Act, also known as PIPEDA (2000). This is a federal legislation that protects personal information, including health information, in the private sector. As such, PIPEDA does not apply to personal information held in government institutions[8]. The Privacy Act (1980), another federal legislation, prevails in this case. PIPEDA does not apply either in organizations where the core activity is not commercial, like hospitals and other clinics within the public health network. Finally, PIPEDA does not apply in Provinces that have substantially similar legislation in place to cover activities that are provincially regulated. As seen in the opening of this chapter, health is such a provincial competency and therefore, PIPEDA applies to health information in Quebec only when it is to be sent outside the province by a private organization. It appears then that Quebec's Health Information Infrastructure must comply with provincial legislation in terms of access and protection of personal information.

In Quebec, there are three different laws concerned with the protection of personal information. The first, labelled "Loi sur l'accès aux documents des organismes publics et sur la protection des renseignements personnels,"[9] (R.S.Q., chapter A-2.1) is the provincial equivalent to the Privacy Act and is concerned with public (governmental) agencies, including health and social services organizations, in terms of controlling

[8] On that account, see http://www.privcom.gc.ca/fs-fi/02_05_d_25_e.asp about the non application of PIPEDA to the MUSH (municipalities, universities, schools and hospitals) sector.

[9] An Act respecting access to documents held by public bodies and the protection of personal information, hereinafter called the Act respecting Access

access to personal information. The second, labelled "Loi sur la protection des renseignements personnels dans le secteur privé,"[10] (R.S.Q., chapter P-39.1) applies to the information collected, used and disclosed in the course of commercial activities. Thus, pharmacies, laboratories and health care providers in private practices such as dentists and optometrists must comply with this law with respect to health care information. Finally the third one, labelled "Loi sur les services de santé et les services sociaux,"[11] (R.S.Q., chapter S-4.2) applies to hospitals, local community health centres and all clinics that are part of the public health network and regulates, amongst other things, the transfer of personal information between health care organizations.

It therefore appears that the CpSQ must comply with at least four different laws, depending on the situation. Whereas a veteran's hospital must comply with the Privacy Act, a dentist must comply with R.S.Q., chapter P-39.1 and possibly PIPEDA, if she is to send information outside the province. Finally, a public hospital must comply with both R.S.Q., chapter S-4.2 and R.S.Q., chapter A-2.1, depending on whether they are transferring information to another hospital or health care organization or facing a request from a patient to access his/her personal record.

In this section, different perspectives and theories concerning ethics were described and the notion of privacy as depicted in both the business and medical informatics literature was introduced. These topics are important for this research considering that they were amongst the elements reported by the media as generating dissatisfaction about Quebec's Health Smart Card project.

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[10] An Act respecting protection of personal information in the private sector, hereinafter called the Act respecting Protection

[11] Act respecting health services and social services

Other Pertinent Issues

Apart from privacy and confidentiality, a few other issues were identified in the literature as crucial in building a national health information infrastructure in the United States (Halamka, *et al.* 2005; Stead, *et al.* 2005). These were problems related to governance, centralization of data, information to be contained within the infrastructure and standardization of data. Whereas the governance issues will be deferred to the section covering stakeholders, the technological choices concerning centralization and content will be addressed briefly here, as will the problems surrounding standards.

A national health information infrastructure requires that information about each patient be consolidated, or be dispersed yet linked in some way. Centralization of the data was voiced as a main concern by the detractors of the initial health card project. Reflecting upon the implementation of their regional interoperable network for the exchange of clinical and financial data in Massachusetts, Halamka and his colleagues identified as a success factor the fact that they opted for a coordinated decentralization rather than a single regional database (Halamka, *et al.* 2005). Centralization of the data requires a universal (in our case provincial) identifier for each patient. For many privacy groups, this poses a serious threat to privacy. This solution also necessitate existing information systems be modified often at great costs (Halamka, *et al.* 2005). Decentralization means that there exists a mechanism such as a master patient index or record location service to determine which records relate to which person (Halamka, *et al.* 2005; Stead, *et al.* 2005). Because such indices do not contain clinical data, the potential for privacy violation is minimized. Considering that the record

number must be filed along with the name of the institution where the health service was provided, a patient index can still contain information deemed private by some individuals (e.g., drug rehabilitation centres, psychiatric hospitals, STD clinics, etc.).

The other technological issue implied in a national health information infrastructure relates to the nature of the information that will be stored (Halamka, *et al.* 2005). Laboratory results, medical images with or without related diagnoses, prescription drugs, diagnosed conditions, allergies, summaries of encounters with health providers, or longitudinal patient records are examples of what can be included in such a system. Literature about the pros and cons of having greater or fewer types of information contained in a national health information infrastructure could not be found at this point.

The last technological component of a national health information infrastructure is standards (Halamka, *et al.* 2005). Because information will flow from different sources to be incorporated within the system, coordinated action is needed in order to build a common reference information model, a common set of data elements, a common terminology, common data structures, and a common transport standard (Ferranti, *et al.* 2006). There are three kinds of standards: reference, minimum quality, and compatibility (David and Greenstein 1990). The required standards allowing interoperable networks to function are compatibility standards. Standards are also distinguished upon the process establishing them. As such, there are formal standards elaborated by standardization bodies, de facto standards emerging from market

mechanisms, and de jure standards imposed by law (Hanseth, *et al.* 1996). In the present project, I will mostly be interested in formal standards.

The literature about standards covers issues such as the role of network externalities (Shapiro and Varian 1999), the complexity inherent to embedding local specificities into standards (Hanseth and Monteiro 1997), and the tension between standardization and flexibility (Hanseth, *et al.* 1996). Two standards are at the basis of information communication: Internet and the OSI model (Tanenbaum 1989). In our day to day activities, we are also used to dealing with plenty of other standards for sharing images (JPEG), or different types of written files (XLS, DOC). Many standards also exist in medical informatics. The most popular is HL7 (Health Level 7), a standard allowing the health care specific data exchange between computer applications. DICOM (Digital Imaging and Communications in Medicine), which standardizes medical images and was jointly developed by the American College of Radiology and the National Electrical Manufacturers Association, is also widely used.

Although there are many standards in use within health care information systems, there is still a lot to do. The ability to create a document that supports the exchange of structured data components is one area yet to be standardized where at least two agencies, Health Level 7's Clinical Document Architecture and The American Society for Testing and Materials' Continuity of Care Record are competing to see their format widely adopted (Ferranti, *et al.* 2006). In situations like these, when developers and standards organizations fail to communicate with and learn from one another, partial overlaps, contradictions and differing data architectures can become a great

obstacle to obtaining a seamless interoperable information system (Ferranti, *et al.* 2006). Standardization is therefore an important issue to consider, when we want to benefit from the full potential of a system such as the CpSQ. Whether it was voiced by one or more of the participants in the process is yet to be seen.

In this section, the literature about the issues considered most relevant for the present project was introduced. Ethics, privacy and confidentiality were the first topics to be presented since they are the concerns that clearly come out of the media coverage of the CpSQ thus far. Next, the problems related to technological choices such as whether or not to centralize the data, which data to include, and what standard to adopt were briefly addressed.

All these issues are not simple, yet they get even more complicated when we consider that there are many groups and organizations concerned with the resulting system. The initiation of information systems projects within interorganizational contexts have not been studied much in the literature. Because IS implementation projects in organizational contexts are often the theatre of multiple confrontations involving different user groups, the body of literature on this subject seems the most useful to counter the lack of interorganizational implementation papers. Behaviours such as resistance to change, implementation cost and duration escalation or simply non-usage of an adopted technology are common consequences of these projects. To alleviate these situations, many solutions have been proposed by researchers: management support, innovation project champion, user participation in system design, and creation of an emergency climate to facilitate acceptance, to name but a

few. Participation and resistance to change reflect quite well what happened when Quebec's government announced that public audiences would be held about the health smart card project. The next section will thus cover the literature on user involvement and participation along with the literature about stakeholder management and governance in an interorganizational context. The literature on resistance to change will be covered in the following section, as it serves to frame the reasoning of the supporters and detractors in the debate.

User Involvement and Participation

For decades, participation has been considered a critical success factor in information systems development. For instance, key participants in planning a strategic information system include individuals from top management, user groups and IT management (Ruohonen 1991). The literature about this aspect of system development is referred to as the user involvement or user participation literature. As such, participants comprise only the interested parties who directly take part in a systems development process. Despite the identification of many types of users by Land and Hirschheim (1983), the term user is very rarely defined in user involvement articles. Guidelines are offered without precision to the intended audience in theoretical papers and different types of users end up being compared to one another in empirical papers. The definition of the term involvement is also loaded with ambiguity. For a long time, the terms involvement and participation were used interchangeably in the literature. It is only in 1989 that Barki and Hartwick rethought the concept and clearly exposed and explained the difference between the two terms (Barki and Hartwick

1989). According to these authors, IS scholars would align their work with that in other disciplines by using the term "user participation" when referring to assignments, activities and behaviours related to an information system and using the term "user involvement" when referring to a subjective psychological state reflecting the personal relevance of an information system.

Since I am interested in a sequence of events that happened over time (behaviours) rather than in the psychological state of mind of the people who participated in the events, it appears that I will be mainly concerned with user participation. There are several ways in which users can participate in system development and ambiguity still persists in the many attributes or characteristics that have been used in the literature to describe user participation. Seven different attributes were found in the literature: type, degree, content, extent, formality, influence and context. For instance, Mumford considers the proportion of users that participate in a system development as the *type of participation* (Mumford 1981). Representation can range from all users to a single representative of user groups. In their well known 1984 paper on the subject, Ives and Olson also argue for the importance of describing the *degree of participation* (Ives and Olson 1984). The degree of participation can range from a project where user advice is heard by the developers without any guarantee of being implemented in the system to a project where the user is being given full responsibility in the development of the system. The *content of participation* is also something that must be described (Hirschheim 1983). Are users involved in technical design activities, social design activities or both? The *extent of participation* is concerned with the variation in scope of the participation during the phases of the development process (Ginzberg

1981; McKeen 1990). For instance, in one project, users participate heavily only in the requirements definition phase, whereas in another one, users participate in every phase including the testing phase at the end. The fifth attribute of participation, *formality of participation*, simply indicates that participation can be organized around formal groups and teams or it can occur through informal relationships and tasks (Barki and Hartwick 1994). The *influence of participation* tackles the effect of participation on the development effort. It ranges from being a simple matter of form to having a significant impact on the project direction and outcome (Ives and Olson 1984). Finally, the *context of participation* designates the perspective within which user participation is studied. In other words, it delineates the perimeter within which individuals are considered users (Cavaye 1995).

Going one step further, Beath and Orlikowski (1994) refer to the ideology of user involvement, maintaining that the rhetoric of user involvement and the prescribed procedures for users found in an information engineering textbook are totally incompatible. The real impact of user involvement, they suggest, is much more psychological than practical; the individuals might have the impression that the decision process took their opinions and hands-on work into account where in fact, it was only a ritual in order to calm the troops and prepare them for the change. The upside of this is that it can create readiness to change and reduce future resistance movements; the downside is that when the users realize that their ideas were not considered, they can feel betrayed and lose confidence in their management.

In most articles, user participation is discussed in the context of internal systems and rarely do they consider users from outside the organization in charge of the development. Very few articles have studied user participation in the development of interorganizational systems although some articles did examine the development of information systems in such settings. It is argued in these papers that the term stakeholders is more adequate for understanding the complexity of the interorganizational context (Pouloudi and Whitley 1997; Introna and Pouloudi 1999; Pouloudi 1999; Pan 2005; Simmons, *et al.* 2005). A stakeholder is "any group or individual [in an organization] who can affect or is affected by the achievement of the organization's objectives" (Freeman 1984, p. 46). Stakeholder management brings together governments, employees, investors, customers, unions, suppliers, local communities and citizens, to name but a few (Post, *et al.* 2002).

Amongst the articles about stakeholders in interorganizational systems, one offers a method to identify stakeholders (Pouloudi and Whitley 1997), while others use stakeholder analysis to better understand the conflicting perspectives of stakeholders (Pouloudi 1999), or to better understand project abandonment (Pan 2005). Finally, one article develops a framework for the analysis of privacy claims and risks based on the notion of stakeholders (Introna and Pouloudi 1999). The three principles in the framework are the access principle, the representation principle, and the power principle. The *access principle* is concerned with the fact that it is often impossible to restrict access to the particular information that is appropriate in a particular context of judgment such that additional (non-pertinent) data may interfere in our decisions often to the detriment of the concerned individual. The *representation principle*

indicates that in order to be considered in the decision process, stakeholders have to be physically present or represented by somebody sharing the same interests and values. The *power principle* is concerned with the fact that some stakeholders' interests outweigh others because of the relations of power, influence and discipline they bring with them to the arena (Introna and Pouloudi 1999).

These principles can seem obvious yet in examining the debates on privacy matters in the British NHSnet, the authors were able to identify problems pertaining to all three of them. It appears that within the British project, patients representatives were physically absent from the debate (representation principle) and chose instead to be represented by doctors, assuming that their claims would be better carried by "heavier" stakeholders (power principle). Also, the notion of implied consent usually used by doctors to share patient's information with other health professionals proved to be problematic when dealing with electronic records held centrally, considering that it would remove the context of each inquiry and hence enlarge the access to non-pertinent data (access principle).

Finally, in 2004, Markus and Mao aimed at revitalizing participation as an important area of IS theorizing and research with a paper published in the Journal of the AIS. Their critical analysis of traditional IS participation theory made them sort the literature into three partial and conflicting explanations of how and why participation affects system success. Each set of explanation leaves important issues unaddressed. The first ensemble puts together participation studies explaining system success with buy-in, i.e., the idea that there are psychological effects on user participants that will

ultimately make them use the system. The unaddressed issue there refers to the discrepancy between the success evaluation of those who participate in the system development and the success evaluation of those who do not. The second ensemble regroups the papers explaining system success with system quality, i.e., the idea that user participation will have a positive effect on the quality of the developed system. The unaddressed issue there refers to the gap between requirements quality and system quality, as the former does not automatically leads to the latter. The third ensemble brings together the articles explaining system success with emergent interactions, i.e., the idea that the relationship emerging between developers and users will have an impact on system success. (Markus and Mao 2004) According to the authors, the issues are further exacerbated by the varied IS development (or changing) context of the third millennium although what they seem to indicate by changing context is either iterative prototyping or joint application development situations and has nothing to do with interorganizational systems.

The Markus and Mao user participation model is a great improvement compared to the previous ones as it is more encompassing of the different user participation attributes or characteristics mentioned at the beginning of this section. What is more, their model specifically refers to stakeholders rather than users, which is more adequate for the present thesis. Figure 3 represents their updated theoretical framework to depict user participation.

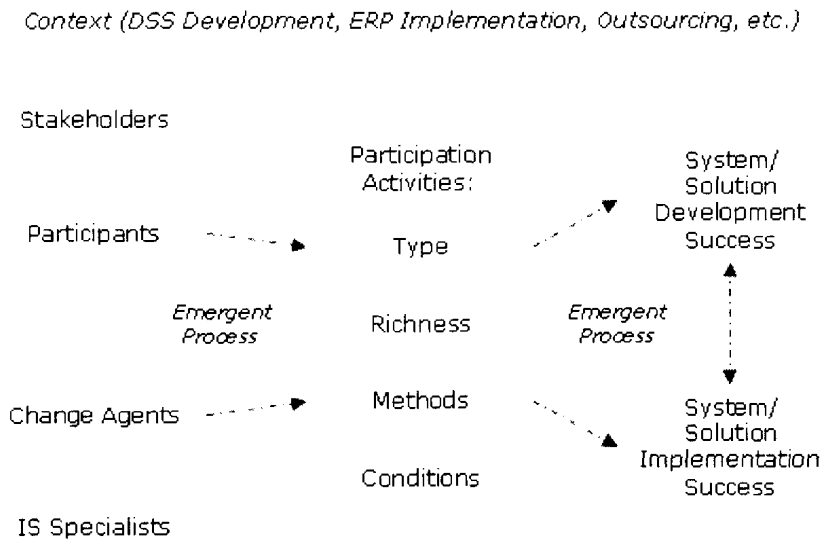

Figure 3 – Emergent Causal Processes Model of IS Participation (Markus and Mao 2004, p. 537)

As mentioned in the previous section, governance was considered a critical issue in building a national health information infrastructure, according to Halamka and his colleagues (2005). Governance can be seen as the natural extension of stakeholder management, it determines the manner in which the decisions are made in the project, in light of the issues that were debated amongst the stakeholders. For instance, in the Massachusetts' project referred to earlier in this paper, the governance model is considered to be a success factor in their project deployment. Because they chose to follow a Senate model rather that a House of Representatives model when making decisions, every organization represented (stakeholder) had one vote, regardless of their size or economic power. This prevented the occurrence of problems based on the power principle explained above. The stakeholders in their project included payers,

providers, employers, patient advocacy groups, the state government, and IT vendor partners (Halamka, *et al.* 2005).

In this section, it was argued that limiting the participation to users has been inadequate in interorganizational settings. The notion of stakeholder seems to be more appropriate to analyse how particular individuals, groups, and organizations take part in the unfolding of Quebec's Health Smart Card initiative. Characteristics from the literature on user involvement and user participation also inform this research; they will be transposed in a broader perspective. The following section will now turn to the arguments put forward by the different stakeholders during the unfolding of the project.

Resistance to Change

Resistance to change was identified as a critical variable in information systems implementation decades ago (Keen 1981) and has been featured in many books and journal articles ever since. In most papers, the notion is treated as a black box (Lapointe and Rivard 2005). According to Lapointe and Rivard, only four articles opened the black box and tried either to explain the reasons motivating resistance behaviours or to examine the different manifestations of resistance. Markus (1983) evaluates three theories explaining the causes of resistance to management information systems. The first theory is system-determined which means that resistance is caused by the innovation itself, often because of an inadequate design. Based upon this logic, a "good" system should never meet resistance from users, or

put differently, a system that has been successfully implemented in one organization should never meet resistance in another organization since it is a "good system". The second theory is people-determined, concerning itself with factors internal to the organization where the system is implemented. According to this logic, people in an organization would systematically resist the implementation of every information system. The third theory is said to be interactive and considers that resistance is caused by the interaction of a particular system with the context surrounding its use within the adopting organization. Markus' article concludes that the interactive theory most usefully explains the unfolding of the events in the case it presents. Joshi (1991) relates resistance to the perception of inequity. As such, when individuals sense that an information system brings along changes in inputs and outcomes, they will evaluate whether these changes affect their equity status, their situation in relation to the organization, and their situation in relation to other users in the reference group. A perception of inequity on any of these three levels brings resistance behaviours. Marakas and Hornik (1996) introduce a specific form of resistance, passive resistance misuse, providing examples of such behaviour and proposing explanations. Martinko and colleagues (1996) elaborate upon the way causal attributions for success or failure are formed on the basis of internal and external variables such as prior experiences with technology and technology characteristics. In turn, these attributions influence expectations with regards to future performances, which trigger affective or behavioural reactions resulting in a positive or negative outcome. This outcome is then integrated within the prior experience variable and, as such, influences future attributions, the model being dynamic and circular.

Lapointe and Rivard elaborate a multi-level and longitudinal model of resistance from the basic components identified within the four models of resistance presented above. On the basis of these models, they identify the nature of the relationships found between these components (Lapointe and Rivard 2005). Figure 4 presents their representation of resistance to IT.

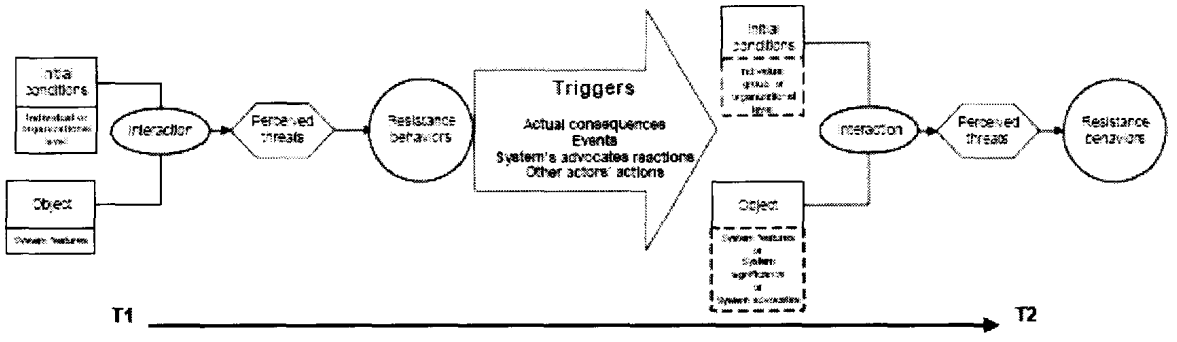

Figure 4 – Multi-level, longitudinal model of resistance to IT (Lapointe and Rivard 2005, p. 480)

In this model, resistance behaviours result from the consequences of information technology that is perceived as a threat. In turn, these threats are the product of the interaction of initial conditions within which the systems is implemented and the object that is rejected by the individuals. The model depicts resistance as a continuing and iterative process. Each new iteration is triggered by the effects of the resistance manifested in the preceding one.

The model was originally built by Lapointe and Rivard (2005) to represent resistance during the implementation of an information system yet it is possible to adapt it to a

pre-implementation context (e.g. Desjardins, *et al.* 2006). The object of resistance differs whether we look at an implementation or a pre-implementation project. During implementation, individuals either resist the system's features, the system's significance or the system's advocates (Lapointe and Rivard 2005). During pre-implementation, individuals cannot resist the features of a system that has not been deployed yet so they either resist the system's significance, the system's advocates or simply technological innovation at large.

In fact, Herold and his colleagues (1995) argue that attitudes towards a new technology represent social constructions that exist way before actual implementation. At that stage though, these attitudes tend to form undifferentiated belief clusters, reflecting either positive or negative predispositions (or initial conditions) towards the envisioned technology. According to these authors, other initial conditions affecting resistance behaviours during pre-implementation differ from those affecting such behaviours during implementation. Whereas in the later case, characteristics such as age, education and seniority are often perceived as determining resistance behaviours, in the former case characteristics such as personal beliefs, organizational variables and labour-management relationships seem to be more predictive of such behaviours.

Finally, a last element worth noting about resistance to change is the nuance between the concepts of resistance and readiness to change. Readiness is said to be "the cognitive precursor to the behaviors of either resistance to, or support for, a change effort" (Armenakis, *et al.* 1993, p. 681). Strategies to deal with resistance have been the

subject of several articles although when these papers suggest applying those strategies proactively, we are acting upon readiness and not resistance. Once manifested by the users, resistance is very difficult to reduce or eradicate. Consequently, it is wiser to work on users' readiness in order to prevent the resistance behaviours. Actions such as education and communication, participation and involvement, facilitation and support, negotiation and agreement, manipulation and co-optation or explicit or implicit coercion have been suggested by some authors decades ago (Kotter and Schlesinger 1979). While some of these strategies (e.g., facilitation, support and coercion) are better used in reaction to changes that have already occurred, many of them (e.g., education, communication, participation, involvement, negotiation, agreement, manipulation and co-optation) work better when used proactively.

In January 2002, the very ambitious Ontario smart card project was dropped after some influential people objected to having such an intrusive technological tool in their daily lives. This is a manifestation of resistance to change. When Quebec's government decided to submit their own smart card project to a public hearing, they asked the people to get involved in the decision process, using one of the most popular strategies to improve readiness and reduce resistance to change in the literature: user involvement.

In this section, the literature about resistance and readiness to change were briefly presented. The emphasis was put on the Lapointe and Rivard (2005) model of resistance to change because it contains constructs – initial conditions and objects –

that can guide the coding process. Also, the similarity between the notions of initial conditions and predisposition, the presence of interaction in their model and its circularity are not inimical to this choice considering how well these features fit within Bourdieu's theory, which will be the object of the next chapter.

Summary

Because the body of literature on the initiation of national health information infrastructure is very scarce, pertinent sub-themes were instead investigated in this chapter. These sub-themes were organized along the lines of the research questions presented in the preamble. The overview of Quebec's health care system, the literature about the evolution of IS in health care and about the resource, the system and the technology at the basis of this research informed the general question. The literature about ethics, privacy, and technological choices pertaining to building a health information infrastructure served as a guide to better understand the debated issues whereas the literature about user involvement, user participation, governance and stakeholder management offered clues about how to look at stakeholders. Finally, the literature about resistance to change and readiness to change shed light on how to further our understanding about the logics deployed.

The next chapter presents the theoretical lenses at the basis of this research, namely Pierre Bourdieu's theory of practice and Bruno Latour's actor-network-theory.

Pierre Bourdieu's Theory of Practice

READING Bourdieu is not an easy task even for someone who can engage in both the original versions of his books and their English translations. His style is characteristically ornate and paradoxical (Sewell 1992) and his translators have usually done well in keeping this feel in their English versions. Bourdieu's sentences are long and convoluted and commas often have to be pinpointed and associated in order to correctly link subjects with verbs, just as parentheses have to be dealt with in order to correctly solve a mathematical problem. Because synthesizing Bourdieu's thoughts is a difficult task, it is tempting to present a collection of quotes rather than a reformulation of his basic ideas. I will avoid doing the former as much as possible here as the goal of this chapter is to simplify Bourdieu as much as possible without losing the richness that has distinguished his work in the last decades.

All social scientists approach their subject via explicit or implicit assumptions about the nature of the social word and the way in which it may be investigated (Burrell and Morgan 1979, p. 1). This chapter introduces Pierre Bourdieu's beliefs about the philosophy of science and the theory of society. The first section presents his ontological beliefs, contrasting his ideas to those of pure objectivists and subjectivists. The second section covers his opinions on epistemology whereas the third section identifies Bourdieu's metatheoretical assumptions about the nature of society. The

fourth section gets to the heart of the matter and elucidates the main concepts of Bourdieu's theory of practice. Finally, parallels are drawn to Giddens' structuration theory, American pragmatism, Foucault's notion of disciplinary power as well as neo-institutional theory to close the chapter.

Ontological Beliefs

It is important to grasp from the outset a crucial characteristic of Bourdieu's venture: his rejection of deep-rooted social science antinomies such as subjectivism vs. objectivism, symbolism vs. materiality, theory vs. research, structure vs. agency and micro- vs. macro-analysis. Not surprisingly, then, Bourdieu's assumptions about the nature of social science are neither realist nor nominalist as he considers both positions to be incomplete when taken alone. Of Durkheim's objectivism, Bourdieu says that it cannot explain how the observed regularities are generated in the first place and also that it slips too easily from model to reality by treating the structures it constructs as autonomous entities able to take action as if they were real agents. Of the constructivists' point of view, Bourdieu believes their conception of social structures as the aggregate of individual strategies cannot account for the resilience of these structures nor can it explain the principles at the basis of the social production of reality (Bourdieu and Wacquant 1992). Bourdieu agrees that social agents construct social reality individually and collectively but warns us not to forget that these social agents are not the ones who have constructed the categories they use in their work of construction hence they are not purely subjective (Bourdieu 1989). In other words, social agents' reality is always constructed under structural constraints.

For Bourdieu, the essence of the social world lies in relations for relationalism forces us to consider subjective individuals' actions in light of the objective structures into which they are evolving and vice versa.

Opinions about Epistemology

Epistemologically, Bourdieu argues that positivists' and anti-positivists' analyses are equally necessary although the analysis of objective structures must come before the analysis of subjective understanding. Bourdieu's social praxeology calls for a double reading of the world. The first reading is concerned with what he refers to as the objectivity of the first order. It looks at the objective structures from the outside, evaluating the distribution of material resources and means of appropriation of species of capital (a concept dear to Bourdieu which will be covered later). These things can be materially observed, measured and outlined independently of the subjective representations of those who live in it (Bourdieu and Wacquant 1992). The reality of the social world, however, is not complete without the consciousness and interpretations of the agents living in it. The second reading therefore helps us uncover what Bourdieu calls the objectivity of the second order – the symbolic templates resulting from subjective representations and framing conduct, thoughts, feelings and judgments of social agents within the objective structure. Spaces of positions result from the first reading whereas dispositions[12] result from the second reading. Considering that the dispositions of agents will vary in accordance with the

[12] It is important to note that the definition of disposition in French (as occasionally in English), and therefore in Bourdieu's theory, encompasses the meaning of predisposition, tendency, propensity and inclination.

position they occupy in objective social space, the analysis of the structure must come before the analysis of mental schemata.

But Bourdieu goes even farther as he believes the two levels of analysis are incomplete without a third level: the thorough understanding of the provenance of the objectivity of the second level and its relations to the objective structures found in the first level. In other words, we must comprehend the origin of the way agents define situations, typify the world and proceed to interpret events and relate them to the external structures of society in order to appreciate the social world in its entirety, or put differently, we have to wonder how the dispositions of the agents positioned in the structure were structured in the first place. The fourth section of this chapter will introduce the main concepts of Bourdieu's theory of practice (also referred to as the conceptual tools of Bourdieu's social praxeology) which will help us make sense of this rather convoluted definition of the social scientist's endeavour. The next chapter will also revisit Bourdieu's epistemology and present in more details his method along with the analytical tools required to conduct research based on his principles.

Before turning to Bourdieu's assumptions about the nature of society, I will define one last central element of Bourdieu's epistemology: epistemic reflexivity. Bourdieu is nothing less than obsessed with reflexivity (Bourdieu and Wacquant 1992) yet his description of the notion differs markedly from other, more common forms of the notion. It is therefore better to further our understanding of reflexivity at large before introducing Bourdieu's marginal conception.

In the last decade, reflexivity has gained near universal approval amongst social scientists such that it has become inappropriate not to be reflexive. Consequently, a multitude of theoretical definitions and taxonomies have appeared and various species of reflexivity have emerged (e.g., endogenous, referential, indexical, constitutive, etc.), each with its set of guidelines and its proclaimed parent (e.g., Schutz, Garfinkel, Mannheim, Giddens, etc.). These reflexive practices share common characteristics in their being sociological, individualistic and narcissistic (Maton 2003). First, they are sociological because they look to investigate the subject's relation to knowledge or, put differently, the "sociologist's knowledge of himself and his position in the social world" (Gouldner 1970, p. 483). Second, they are individualistic for the "I" of the sociologist becomes a pivot as it is both the object of reflexivity and the carrier (Bourdieu and Wacquant 1992). Finally, reflexive practices are narcissistic because they end up focusing mainly on the author while sometimes totally usurping the alleged object of the study (Maton 2003), as exemplified by confessional accounts.

In opposition, Bourdieu's epistemic reflexivity is epistemological, collective and anti-narcissistic (Maton 2003). First, it is epistemological because it objectifies the relation between the subject and the object. Thus, as illustrated in figure 5, beyond analyzing the object (B) to create knowledge (C), subject (A) must also analyze his/her objectifying relation (AB) to produce a more "reflexive" account of knowledge (C) (Maton 2003). Second, it is collective because it investigates (and reflects) the organizational and cognitive structures of the discipline hidden in the theories, definitions and taxonomies used by the subject (A) in order to build knowledge (C) and because it must be performed by all the colleagues in the subject's scientific or

intellectual field (Bourdieu and Wacquant 1992). Thus both the object and subject of Bourdieu's reflexivity are collective (Maton 2003). Finally, epistemic reflexivity is anti-narcissistic because it reveals the epistemological unconscious of the researcher's discipline rather than his/her own individual unconscious (Bourdieu 1980).

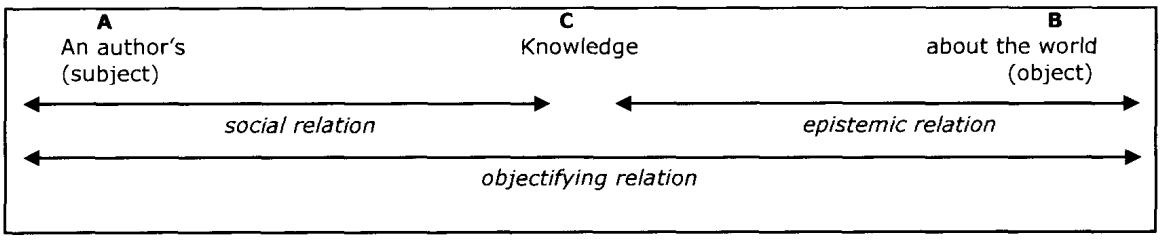

Figure 5 – Three relations of knowledge claims (adapted from Maton 2003, p. 57).

Assumptions about the Nature of Society

Domination is a central notion in Bourdieu's sociology. His theory therefore falls on the radical change side of the Burrell & Morgan matrix (1979). His main ambition is to understand why dominated social agents are disposed to accept the domination of others, most often unconsciously, as well as how dominated agents arrived at their social positions in the first place, what strategies were used to maintain them afterwards and what influence culture had upon those strategies (Bourdieu 2000). Bourdieu's common usage of terms such as capital and symbolic violence help him to depict the domination patterns found in social practices. The definition of these concepts will therefore give further details on his perspective on domination.

A Theory of Practice

A thorough understanding of the notions at the basis of Bourdieu's social praxeology is crucial to study events through his critical lens. This section presents his definitions of capital, field, illusio, symbolic violence and habitus. When appropriate, comparisons and contrasts with known concepts are presented in the hope of covering the subject at the same time as the objection is raised (or cognitive link made) in the mind of the reader.

Capital, Field and Illusio

The notion of capital is very important to Pierre Bourdieu and a parallel with Marx's historical materialism is often drawn. There are however crucial differences between the two ideologies, beginning with their conception of classes. Marx considers society as two classes constantly fighting each other, the dominants who control economic capital and the dominated who are deprived of it. The government, by facilitating a capitalist mode of production, serves to reinforce the dominants' position. According to Marx, the only way to stop this everlasting battle is to build a society without classes, hence his concern with communism.

Bourdieu rises up against this substantialist perspective because it presupposes that people (forming a class) will be working together, sharing common sense and above all, sharing the will to act upon common objectives. He accuses Marx of taking a leap of faith from theory to practice when he maintains that the existence of social and

economic conditions automatically creates a class and believes rather that in order to create a "non-theoretical" class, people who share social and economic conditions also have to be mobilized in their intention to confront the opposing class and this occurs infrequently. Bourdieu argues that individuals, not classes, are fighting one another and that social classes do not exist except in their virtual form. What does exist is a social space where people are positioned in relation to one another based on the capital they accumulate during their life. Obviously, these individuals are fighting each other to occupy the best positions within the social space. This battle between dominants and dominated plays out on different levels within society and is much richer than in Marx's conception. For the latter, every conflict is yet another consequence of the fight between workers and capitalists whereas for the former, every conflict has its own characteristics and follows distinct rules and logics. Every social space creates a battlefield that forces people to undertake some actions that ultimately end up in some form of domination. Thus the distinction between the dominants and the dominated is the only commonality between both views.

A second difference between Marx's and Bourdieu's ideologies stands within the forms capital can take. Marx's capital is merely economic for he sees individuals as primarily homo œconomicus. As noted in the introduction, Bourdieu's capital can take many forms: mainly economic, cultural, social or symbolic, but also political or statist. Also, very importantly for him, capital does not exist and function except in relation to a field. It is therefore crucial to introduce that notion before moving on.

A field in Bourdieu's sense is simply a configuration of objective relations between positions (Bourdieu and Wacquant 1992, p. 97) within an arena where resources, stakes or access are disputed by individuals occupying those positions. Individuals or institutions owe their situation in the field to the amount and type of capital they accumulate throughout their lives. In each field, one type of capital is worth more than the others. For instance in the classical music field, professional recognition and autonomy (two kinds of cultural capital) are, to many artists, more important than material profits. In order to gain any type of capital, one has to invest time, knowledge, labour or money. The best positions in a field are thus occupied by those who have the greater amount of capital of the most desirable type.

In order to help us better understand his notion of field, we might consider Bourdieu's comparison of it to a game. When playing a game, the players are invested in it to win. In a similar manner, people are invested in their field to gain access to the profits at stake. The players in a card game hold cards of different suits with different values. Again in a similar way, people in a field possess different types of capital in variable quantity. Strategy will differ based on the cards (value and suit) players possess and whether those are trump cards or not. Similarly, the strategy of someone in a field will vary according to the amount of each species of capital he or she owns as the most valued type of capital for the field becomes the trump card.

Just as players usually have a feel for the game in order to participate fully, individuals invested in a field can count upon illusio, the unconscious and never questioned conviction that what is at stake is desirable, the result of an "enchanted

connection" between the mental (subjective) structures of the participants and the objective structures (structures of the capital distribution) of the field. Illusio is what confers stability to the field, assuring that participants occupying opposite positions in the field recognize the same set of rules as the basis for their claims.

A useful illustration of how these concepts are used analytically appears in a book called *The State Nobility* (Bourdieu 1996), in which Bourdieu is mostly interested in the field of Elite Schools in France (Grande Écoles).

Concept	Example
Field	Elite Schools in France (*Grandes Écoles*)
Common stake	Gaining access to them and performing well in them in order to gain the social position that goes with it on the job market at the end
Capital most valued	Social capital, especially parents' professions
Illusio	Knowing how to play the system; attending the right colleges and the right preparation schools

Table 1 – Illustrations from *The State Nobility*.

Habitus

Illusio gives rise to habitus,

> a system of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes, without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them. (Bourdieu 1990b, p. 53)

The structured structure is reflected in the dispositions to act, perceive, feel and think in a certain manner, interiorized and incorporated by individuals throughout their lives. The structuring structure manifests itself in the practical sense (*sens pratique*, translated as logic of practice), i.e., the ability to move, act and "go on" according to the position occupied in the social space, and according to the logic of the field and the situation in which we are involved. Consequently, habitus allows some individuals to perceive a particular field as well as their role in it and prevent others with a substantially different habitus to even consider this field as existent.

As mentioned above, habitus is durable: the structured structure produces structuring structures that will persist in the long run through actions, thoughts, feelings and sensitivity. Habitus is also transposable: it will operate in any conditions identical or analogous to the ones that structured the habitus in the first place. Finally, habitus is also unconscious as the practices it generates are both organized and regular (*réglées* and *régulières*) without resulting from adherence to rules (*règles*). They are collectively orchestrated yet they are not the product of the organizing action of a conductor (Bourdieu 2000). In a way, habitus causes agents to fall into certain practices (Bourdieu 1990a).

From the explanations given so far, individuals sharing the same position in a field should also share the same dispositions. This in turn should call for a finite choice of practices that in the end would always reproduce the existing structure. Bourdieu avoids this (pure structuralist) trap by adding a third leg to the so far two-legged notion of habitus. The concept of social trajectory – the series of positions

successively occupied by a certain agent in a field – thus complements the notions of position and disposition. Social trajectory reflects experience and experience is what constantly affects dispositions, either reinforcing or modifying its structures (Bourdieu and Wacquant 1992). This is why Bourdieu says of habitus that "[i]t is durable but not eternal!" (Bourdieu and Wacquant 1992, p. 133). The unconscious nature of habitus makes it mostly invisible to others. Nevertheless, habitus is perceptible in an individual's accent, use of language, dress code, social skills, and tastes in food, music or visual art to name but a few. Table 2 offers an example of how habitus is conceived in *The State Nobility*.

Concept	Example
Habitus	How children are raised by their parents from their younger age influences their decisions throughout their life. It has repercussions on various things such as their effort at school, their companionship etc. These decisions in turn constrain further choices later in their life.
	The seed of which "school to attend" is planted very young in children who have the right capital (social capital, characterized by parents' professions as mentioned above).

Table 2 – Illustrations from *The State Nobility* (2).

Domination and oppression are inevitably reproduced because of the habitus; the subjective interiorizing process of the objective structure of domination contributing to its reproduction. From the moment this perpetuation of power is deemed legitimate, we are facing symbolic violence.

Doxa and Symbolic Violence

Earlier, I noted that Bourdieu considers domination as omnipresent in social life but that his conception, in terms of forms of capital for instance, was broader than Marx's. This notion takes roots in the importance Bourdieu grants to symbols. On the one hand, as structuring structure (e.g., culture and language), symbols or symbolic systems are considered instruments of knowledge and instruments of construction of the objective world. On the other hand, as structured structures (e.g., behaviour and speech), symbolic systems are also considered instruments of communication. Consequently, as structuring and structured structures, symbolic systems can be seen as instruments of social integration as they bring about consensus on the social world contributing directly to its reproduction. Furthermore, as ideologies, symbolic systems are considered instruments of domination, legitimating the hierarchies created by the dominant culture. Putting all those definitions together, Bourdieu concludes that as structured and structuring instruments of domination, symbolic systems serve to reproduce the domination and oppression patterns of the field.

Recognition and misrecognition are critical components of Bourdieu's idea of the symbolic[13]. Whereas recognition (*reconnaissance*) implies that the value of some features (i.e., accent or social position) are considered superior (hence acknowledged) by the field, misrecognition (*méconnaissance*) relates to the fact that structuring and structured structures are not consciously acknowledged in terms of the social

[13] Recognition and misrecognition are translations of *reconnaissance* and *méconnaissance*. In French, both words are derived from *connaissance*, literally meaning knowledge. Here, the semantic cluster for *connaissance* is wider than in English as it implies familiarity at an implicit, tacit level as much as knowledge of facts and things. This practical side of knowledge should thus be inferred to *reconnaissance*, *méconnaissance* and their English translations throughout this research.

differentiation they perpetuate in the field even though they are recognized as legitimate (Grenfell and James 1998c). Consequently, the "symbolic" refers to that which is material but not recognized as such (Mahar, *et al.* 1990). For instance, things such as language and dress codes are both structured and structuring just as if they were material, yet the impact they have on the way the field is reproduced is not consciously acknowledged. Their efficacy is thus derived from this very misrecognition. Likewise, symbolic capital (or power) represents any form of power that is endowed with a specific efficacy in a field, based on arbitrary decisions that are misrecognized. Attributes such as prestige, status and authority are usually referred to as symbolic capital (Harker, *et al.* 1990).

For Bourdieu, from the moment the perpetuation of power is not questioned, we are facing symbolic violence – the power to impose the arbitrary instruments of knowledge and communication of social reality (Bourdieu 1991), the ability to legitimate unequal and oppressive social arrangements (Prasad 2005) or, put differently, the capacity to extort favours based on "collective expectations" and socially inculcated beliefs (free translation, Bourdieu 1994, p. 188). This is why Bourdieu defines symbolic violence as "the violence which is exercised upon a social agent with his or her complicity" (Bourdieu and Wacquant 1992, p. 167). This complicity is neither a passive submission to an external constraint nor a free adherence to values. It rather results from the misrecognition of hidden interests for the neutrality of morally driven choices (Bourdieu 1982). The work and pay structure found in modern corporations (Everett 2002) and the high prices and class partition found in the American privatized higher education system (Prasad 2005) are two

examples of symbolic violence since both sites consider as a given the unequal distribution of social goods and services.

Doxa refers to the perspective of the field's dominants which presents and imposes itself as a universal point of view. It is simply a different term to describe "common sense" or "what goes without saying". From the moment legitimacy is not questioned, arbitrariness is not perceived and symbolic struggles are not fought, we are facing a doxic society (Everett 2002), a very fertile land for symbolic violence. Table 3 illustrates its use in *The State Nobility*.

Concept	Example
Symbolic violence	Evaluation by professors of students in preparation schools. Bourdieu demonstrates that these comments vary from negative to somewhat positive depending on whether the student's parents are from a profession ranked low socially or reside outside Paris, or their parents are from a profession ranked high socially or reside in Paris. Because overall, every evaluation is fairly negative, the students from lower social backgrounds consider these as just, normal and formative and believe they are "playing" on the same level as the other students from higher social backgrounds.

Table 3 – Illustrations from *The State Nobility* (3).

Language

From what we have considered thus far, language is a symbolic system. As such, it is both a structured structure – a repository of naturalized preconstructions functioning

as an instrument of knowledge (Bourdieu and Wacquant 1992) and a structuring structure – an instrument of communication (speech) (Bourdieu 1991). But language is also a medium of power (Goke-Pariola 1993) for it is what gives someone authority within a group and power to speak for the group.

Bourdieu's conception of language differs markedly from contemporary fathers of linguistics such as Ferdinand de Saussure and Noam Chomsky. Those authors both distinguish the idealized linguistic universal from the individual acts of communication. In Saussure's terms then, *langue* (language) is different from *parole* (speech) whereas in Chomsky's terms, linguistic "competence" differs from linguistic "performance" (Grenfell 1998). Not surprisingly, Bourdieu disagrees with these dichotomies. While Saussure and Chomsky argue that linguistics should only study *langue* or "competence" (the structured structure), Bourdieu firmly believes that language is both the product (structured) and the process (structuring) of social activity, what he refers to as a social practice (Snook 1990).

As mentioned earlier, language is also an instrument of domination yet it is inadequate to look within it for the source of its power. This is because for Bourdieu, authority comes to language from the outside, as depicted by the skeptron which, according to Homer, was handed to the orator about to deliver a speech (Bourdieu 1991). This means that authority to speak first has to be conferred to an individual and that once this individual has secured the right to speak, he or she had gained the power to name, to label things (Snook 1990).

The fact that linguistic performance is as important as linguistic competence makes it impossible to analyze language apart from the people who use it (Snook 1990). Furthermore, the fact that words are valued differently within social spaces makes it impossible to analyze language apart from the field of social activity where they are pronounced. The language style of those who speak from authority in a field defines the linguistic norm for this field and linguistic value of other words or meanings is then established in relations to this norm (Grenfell 1998). This system of relations of force which determine the price of linguistic products is referred to by Bourdieu as the linguistic market (Bourdieu and Wacquant 1992) where, just as in any other markets, products are chosen by individuals according to their ability to generate material or symbolic profit (Bourdieu 1991). This capacity to choose profitable linguistic products comes from the individual's linguistic habitus; it is directly proportional to the amount of linguistic capital he or she possesses. Although everyone in a field should recognize (*reconnaître* from *reconnaissance*) the prevailing linguistic norms, only the dominants will effectively know (*connaître* from *connaissance*) how to use them in practice. The dominated who seek to appropriate the linguistic style of the dominants often fall into hypercorrectness; they over-use valued language markers and end up sounding faux (Grenfell 1998).

Because they are the product of the encounter between the linguistic market and the linguistic habitus, discourses always reflect the social structures of the orator on the one hand and help reproduce it on the other hand. The more highly positioned the speaker in the field, the more he or she will know about how to speak in various contexts and master the process of assigning prominence to certain segments of the

speech through stylistic variation, in response to audience and context. Bourdieu calls that process censorship, a notion that is intrinsic to his conceptualization of the linguistic market (Peterson 1993).

Comparisons with other Theories/Theorists

In the following sections, Bourdieu's theory of practice will be contrasted to other theories/theorists with whom comparisons are often heard or read. Since it is outside the goal of this paper to explain thoroughly these alternative theories, it is assumed that the reader has a basic familiarity with them to fully appreciate the distinctions. Because the comparison of Pierre Bourdieu with Bruno Latour is the subject of chapter five, it is not covered here.

Bourdieu vs. Giddens' Structuration Theory

Bourdieu's theory of practice is often compared to Giddens' structuration theory. It is true that both authors share the objective of overcoming the structure/agency dichotomy, elucidating what Giddens calls the duality of structure and Bourdieu calls double structuration (Harker, *et al.* 1990). Both notions refer to the idea that the structural properties of social systems are both medium and outcome of the practices they recursively organize, they are at the same time structuring and structured.

But whereas Giddens highlights the role of individual interpretation in the reproduction of structure, emphasizing the importance of individual choice and social competence within a broad framework of power, Bourdieu focuses on the cultural constraints on individual choice, competence and action, hence considering culture as the central dynamic (Prasad 2005). As such, Bourdieu does not attribute any real essence to actors and rather regards them as constituted by the social space within which they are embedded (Lounsbury 2003).

A second difference between both theorists stands in their conception of theory and research. On the one hand, Giddens believes that theory should benefit from a relative autonomy from research and that purely conceptual and ontological work has value. As a result, he is mostly concerned with issues of social ontology and conceptualization (Bourdieu and Wacquant 1992) and he offers a very abstract theory that has been followed by very few empirical studies (Barley and Tolbert 1997). On the other hand, Bourdieu argues that good theory should never be severed from the research work that engenders its structures (Bourdieu and Wacquant 1992). Consequently, Bourdieu shows little interest in the refinement of conceptual schemes and rather strives to construct a method which accounts for both structure and agency and to develop methodological tools to guide the practice of research following a theory of practice.

Closely linked to the above, a third point of dissonance between the authors arises in the importance both authors grant to consciousness. In Bourdieu's social praxeology, culture is something that is learned with the body and incorporated into habits such as

the way one stands, speaks or eats. Hence the internalization of culture is a bodily conditioning rather than a conscious cognitive exercise (Harker, *et al.* 1990). In Giddens' structuration theory on the other hand, the notion of consciousness is fundamental, more precisely the notion of practical consciousness – what is characteristically simply done and cannot be said – which Giddens distinguishes from discursive consciousness (Giddens 1984). More than a disagreement over terminology, the main distinction between bodily conditioning and practical consciousness lies in the importance granted to sociology and sociologist in the social reality being studied (Harker, *et al.* 1990).

This distinction carries over to the fourth difference between Giddens and Bourdieu: their conception of reflexivity. For Giddens, reflexivity is "the monitored character of the ongoing flow of social life" (Giddens 1984, p. 3). It is thus what allows the agent to elaborate discursively upon the reasons of his or her actions, or to use Giddens' own terminology, it is what permits the translation of practical consciousness into discursive consciousness. As mentioned earlier, it is sociological, individual and narcissistic. In opposition, Bourdieu's concept of epistemic reflexivity is epistemological, collective and anti-narcissistic thus encompassing sociology as a discipline and the sociologists that form it.

Finally, both authors differ in their assumptions about the nature of society. The notion of cultural struggle is central to Bourdieu's vision of society (Prasad 2005). As such, he favours a conflict-based view of society. Giddens in opposition has much

faith in individual agency and thus views society as ordered and regulated (Prasad 2005).

Bourdieu vs. Institutional Theorists

Just like Bourdieu's theory of practice, institutional theory highlights cultural influences on decision making and formal structures (Barley and Tolbert 1997). Originally, institutionalists claimed that institutions and actions were tightly connected and that institutionalization was best understood as a dynamic, ongoing process, hence bringing their thoughts very close to Bourdieu's. However, the way institutions are created, altered and reproduced has been largely ignored in the empirical papers that use institutional theory (Barley and Tolbert 1997). Over the years, what started as a somewhat social constructivist approach gave place to a view more in line with the dominant functionalist paradigm in organizational inquiry (Bowring 2000), thus parting with Bourdieu's vision. This results from the fact that new and neo-institutionalists have concentrated on the effects of institutions instead of exploring their constitution in social practice (Phillips 2003). This epistemological break constitutes the first difference between Bourdieu and the institutional theorists.

Second, although they view legitimacy as a crucial concept, institutional theorists are not critical of this notion. Theorists of practice, on the other hand, are critical of its corollary concept: symbolic violence. Therefore, the two streams of theorists do not

share the same assumptions about the nature of society, the former viewing the world as orderly and the latter as disorderly.

Third, the term field is very important in both theories yet it is not defined in the same way. For institutional theorists, the term field means "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (DiMaggio and Powell 1983, p. 148). The institutional theorist's definition of field is thus missing the notions of objective relations and disputed resources, stakes or access from Bourdieu's definition of the same concept. Institutional theorists also presuppose that actors are knowledgeable and that institutions always constrain the very actions that produce them, two further distinctions from Bourdieu who instead states that the actor is conditioned and that fields enable as much as they constrain.

Finally, the logic behind the creation, transformation and demise of institutions, as well as the logic behind the effect they have on actors, are largely taken for granted in institutional theory (Phillips 2003). This would be different if institutional theorists were, as are theorists of practice, inclined to use epistemic reflexivity in their conduct of research.

Bourdieu vs. Foucault

Michel Foucault is another theorist to whom Pierre Bourdieu is often compared. Both French citizens, Foucault even sponsored Bourdieu's candidacy to the chair of sociology at the Collège de France. Some of the points they have in common are their negation of formalist structuralism, their need to break with the philosophy of consciousness, their scepticism towards "truth" and their emphasis on the role of bodily practices in mediating relations of domination (Harker, *et al.* 1990; Cronin 1996; Everett 2002). Both authors also try to retain radicalism albeit outside Marxism (Harker, *et al.* 1990).

At their very basis, Foucault's and Bourdieu's vision of power are very different. For one, Foucault is against the idea that power involves one individual or group exercising control over another. In fact, Foucault's disciplinary power does not require a relation of authority in order to be effective as it directly acts on the body to inculcate normalized responses. As a result, the subject itself is turned into a vehicle of power, continuously restraining his or her behaviours in order to respect the overarching field of force floating over society and resulting from economic, familial, and other social relations (Cronin 1996).

However, Foucault is not concerned with the accounts and practices of social agents in studying disciplinary power (Everett 2002). In a similar manner, he is not interested in knowing whether the power is legitimate or not as he does not wonder about questions such as "Who has power?" or "What is on the mind of the person who has power?" and rather turns to a functional analysis of power, asking questions

such as "How is power exercised?" (Brenner 1994). Thus distinctions based upon gender, race and class are somewhat missing from Foucault's theory. This abstraction of the social is reflected in the lack of reference to the "state" in the writing of the early Foucault, although it changed with the work on governmentality of the later Foucault.

Bourdieu vs. American pragmatists

According to Bourdieu, the affinities and convergences of his theory of practice with the philosophical tradition of American pragmatism are striking and are based most probably on his effort to work against the deep-seated intellectualism characteristic of all European philosophies (with the rare exceptions of Wittgenstein, Heidegger, and Merleau-Ponty) (Bourdieu and Wacquant 1992, p. 122).

The theory of practice presents many similarities with the theories of pragmatists such as Dewey, which grant a central role to the notion of habit and also reject all the conceptual dualisms usually found in most philosophies: subject and object, internal and external, material and spiritual, individual and social, and so on (Bourdieu and Wacquant 1992).

The central difference between these theories lies in the reasons motivating their way of conducting research. Whereas Bourdieu clearly exposes the ontological and epistemological assumptions that pushed him towards balancing between positivism

and anti-positivism, pragmatists consider such questions of metaphysics and epistemology as both vexing and seemingly irresolvable. For them, as long as the information collected and analyzed is useful, the research should be done. This criterion of usefulness applies across two dimensions: epistemological – whether the information is credible, well-founded and reliable; and normative – whether it helps advancing the project. As a result, a good method for one project can be discarded for the next one on the basis that it does not add anything to it. Research at large should be conducted with the aim of helping people to better cope with the world and organizational research with the aim of helping people to create better organization (Wicks and Freeman 1998).

Finally, whereas the pragmatists make a case for not having to choose between epistemologies, they do not raise questions of legitimacy and thus seem to picture the world as orderly, in opposition to Bourdieu's critical stance.

Considering that this research was motivated in part by the desire to examine the political aspects (power games) that occurred during the CpSQ project, the theoretical lenses of structuration theory, institutional theory and American pragmatism were not retained because of the insufficient attention they directed to domination patterns. Also, the fact that I was interested in learning about who had the power (and whether it was legitimate or not) in addition to how the power was exercised made me privilege Bourdieu over Foucault. Finally, the existence of a detailed method for conducting Bourdieuian research made me choose that lens over newer theories such as critical institutionalism.

Summary

Pierre Bourdieu's theory is difficult to assimilate. This is in part because as with many social theories, it often flirts with philosophical ideas. It is also very complex and detailed. Nothing is random in his argument and the reasoning behind his basic assumptions is always explained at length. It follows that simplifying his thought is a perilous endeavour. Summarizing such a simplification proves to be even more difficult.

Bourdieu is neither objectivist nor subjectivist. His dialectic approach calls for a gentle sway between both ideologies and puts the emphasis on the relations between the subjective individuals' actions and the objective structures that facilitate or constrain them. In the same manner, Bourdieu argues that both positivist and non positivist analyses are necessary for conducting good research and as such, he calls for a double reading of the world. He names these readings objectivity of the first order and objectivity of the second order, the former referring to measurable, objective facts and the latter to categories of perception and other subjective facts. In choosing these names (first vs. second order), Bourdieu implicitly recognizes that objectivity has precedence over subjectivity in his mind. Three of the conceptual tools elaborated by Bourdieu help us in carrying out this double reading: field, habitus and illusio. A field refers to a social space where the positions of the members are presented in relation to one another. Habitus on the other hand refers to the dispositions of these members, their practical sense. Habitus is driven by illusio, the conviction of the members that what is at stake within the field is desirable.

Another important aspect of social praxeology is the fact that domination patterns usually reproduce themselves within society. To this effect, Bourdieu clearly adopts a critical stance. He elaborates the conceptual tools of capital and symbolic violence so that we can better understand this reality. For him, capital appears in several forms: economic, cultural, social, symbolic, etc. In each field, one type of capital is worth more than the others. The dominants in a field are those who are more affluent in this type of capital than the others and they usually act upon the principle that their view of the world is universal. As such, the ideas they impose serve to reproduce the domination and oppression patterns already present within the field. This behaviour is considered symbolic violence as long as the real interests of the dominants are not questioned by the dominated.

Bruno Latour's Actor-Network-Theory[14] CHAPTER FOUR

From æther to plasma

READING Latour is a totally different experience than reading Bourdieu. Whereas Bourdieu's convolutions are intellectually difficult to appreciate at first glance, Latour's writing style is so down to earth that it is destabilizing. It requires several pauses along the way in order to put things into perspective, to reshuffle previous knowledge and place it differently in light of the teachings offered. Then it literally comes to life and becomes difficult to shake out of your system. For instance, in writing this paragraph, I myself realize that I am simply being an actor-network, mediating in my own way Latour's work. But let us not put the cart before the horse and let us do things scientifically, shall we?

This chapter literally mirrors the chapter on Bourdieu in its structure. It is therefore its exact, yet reversed replication. The first section introduces the important concepts of Latour's actor-network-theory (ANT). The second section presents Latour's assumptions about the nature of society, whereas the third section identifies his opinion on epistemology. Finally, the fourth section covers his ontological beliefs.

[14] I am aware that ANT is not only the fruit of Bruno Latour's research and I acknowledge the important contribution of Michel Callon as well as the extensive body of literature from John Law on the matter. However, this short introduction is mainly based on books written by Latour and its purpose is not to fully explain the distinctions between the versions of ANT that came from each author but to summarize one version of it in a digestible way.

The Actor-Network-Theory

Over recent years, the term social has come to be considered as the æther of the humanities, an equivalent to the substance that filled the emptiness in the physics of ancient days. As such, social scientists would systematically contend that the social explains events or things where all other hard science has failed to do so. This is affirmed without further ado as if the social were really there, as if it existed, period. According to ANT, the social does not explain anything. Instead, it is the social that must be explained, but in order to do so we must first redefine the term appropriately.

The "social" does not refer to this invisible (non-existing) material, as described above – which Latour calls social #1 – nor does it refer to simple face-to-face encounters – which are called social #3. The social (#2, the important one according to Latour) rather refers to the associations occurring at every moment between things that are not social as such (Latour 2005). Because of this type of connection (the social #2), transient assemblies are created by both human and non-human entities. These assemblies or assemblages may (or may not) disappear as fast as they were instantiated in the first place but, and this is crucial, in doing so they leave their trace behind. Therefore for Latour, sociology is not the science of the social, but rather the tracing of associations (Latour 2005). This is what ANT is all about, a sociology of associations, in contrast to a sociology of the social.

What Associations?

What does ANT tell us about associations? First and foremost, that there is no formal starting point, no established grouping unit for conducting social research. Put differently, there exists no basic building block of society. Instead we must learn to feed from the controversies laid out by the actors and find order within chaos. Groups are forming and dismantling constantly, as every actor is made to fit in a certain assemblage at any given moment of their life. The creation and destruction of these groupings leave traces that the ANT researcher must study attentively (Latour 2005).

Of course, the human actants of these groups are one of their visible traces. For instance, one can decide to track down who made up the group, who talks for the group and who holds the group together with their actions. References that are made by the actants to other formations they choose not to join are also important traces (Latour 2005). Just as we learned in Ferdinand de Saussure's semiotic treatise that a sign (in its signified form) is negatively defined by the existence of an opposing concept (Culler 1976), there is much to be learned from what Latour calls the "anti-groups," whether they are engaged in the controversy or totally absent from it. Traces are also left by social scientists and social journalists tackling the controversy with their studies and articles. In doing so, these entities too become a part of the group (or of the anti-group, for that matter) and the effects their actions have upon the existence, decay and disappearance of the groups should not be underestimated (Latour 2005).

Assembled vs. Constructed

When he started developing ANT, Latour talked about the social construction of scientific facts (Latour 1995). As the term social has already been redefined above, it is now important to pause and reflect upon the term construction.

In ANT, whenever we say that something is constructed, we mean constructed as a building is constructed, that is to say having its roots in architectural sketches and being built by human workers who follow engineering plans (which themselves conform to a national building code). All of this is done to guarantee solidity, robustness and durability, among other things, although assemblages are always subject to failure (e.g., the collapse of the Twin Towers a few years ago). Hence, a construction results in the fusion of human and non-human actants and it is always subject to failure (or falsification?) at some point or another (Latour 2005). Needless to say then that a construction is real, it is true. It is not something that has been invented, made up and false. This point becomes even more important when the terms social and construction are brought together, considering that most people regard the social as the social #1, a non-existing æthereal substance. Of course, whenever something is made of a material that cannot be proven, it is contrived and false. But the social that interests us here is not a material or a substance; it is the actual associations that are being constructed. Social construction is therefore a pleonasm that should be put aside from now on.

What is Being Assembled?

We have already mentioned that actors can either be humans or non-humans and, therefore, introduced the more appropriate term of actant. We also referred to actions several times. This is not fortuitous, as action is necessary for associations to be kept alive, associations being the object of a performative definition, i.e., it disappears when it is no longer performed. As such, the means to produce the social must be mediators rather than intermediaries. Whereas an intermediary can transport meaning or force without transformation (what comes in comes out), a mediator systematically alters what it carries, most often by triggering other mediators (Latour 2005). Hence, the moment something or someone introduces a difference in the course of action of another agent, it becomes a mediator, and thus, a full-fledged actant. To put it differently, a mediator is an agent at "work," and since agencies are rarely influenced by only one mediator at a time, we can say that they are subjected to a "net" of mediators hence the term network. The fact that it should have been "worknet" instead is underlined by Latour himself (Latour 2005, p. 143). Yet the inversion goes even farther when one lingers over Latour's definition of an actor-network: "an actor-network is what is made to act by a large star-shaped web of mediators flowing in and out of it. It is made to exist by its many ties: attachments are first, actors are second" (Latour 2005, p. 217). Thus, despite the official label, in Latour's mind, work takes precedence over net and network (or worknet?) takes precedence over actor.

We have seen so far that humans are involved in controversies and that it is in carefully looking at these that we discover the associations, i.e., the social. Latour

maintains that non-human actants too take part in controversies and he urges us to discern matters of fact from matters of concern (Latour 2004).

Matters of fact are used by human agents as irrefutable statements. Very often, it is contended that this indisputableness is simply natural, as if nature was this repository of real things that cannot be challenged. Not surprisingly, Latour contests this definition of nature, just as he does the definition of social. He warns us against the premature unification into matters of fact that is implied by the term nature (for most people). Nature, he argues, should simply refer to the deployment of reality, or should we say realities considering that matters are usually disputed for a very long time before setting into a stable (yet temporary) state. This is what Latour calls matters of concern; the real, objective, atypical and interesting gatherings[15] that fill this world and participate relentlessly in the social (Latour 2005).

How Can We Reassemble the Social?

As mentioned before, the main task of a sociologist of associations (aka an ANT researcher) is to render the associations traceable again. In order to do so, it is very important that the social be kept flat (Latour 2005). The simplest properties of nets must therefore be recognized and the three dichotomies commonly used by the sociologists of the social must be dismissed. They are the distinctions made between far/close, big/small, and inside/outside.

[15] As in the notion of empowered things used in Heidegger, M. 1993. "The Question Concerning Technology," in: *Martin Heidegger: Basic Writings*, D. F. Krell (ed.), Harpercollins Publishers, Inc., New York, NY, U.S.A., pp. 308-341..

First, the physical or geographical closeness of two elements does not mean that the two are connected. What's more, two physically distant yet connected elements can be considerably close to one another connection wise, and vice versa. For instance, if I am talking to my mother from a public telephone, I am in fact closer to her than to the person standing next to me in the second telephone booth, despite the fact that my mother is geographically hundreds of kilometres away. Second, there is no distinction between micro, meso or macro within ANT. As a chain of several mediators, a network can be longer than another one. Also depending on the number of mediators each mediator has in turn, one network can be more intensely connected than another. But a network can never be bigger or smaller than another one, just as it is not hierarchically organized in any way. It follows that every element in the network must be studied in the same way as the next one. Practically, this means that the context is not different from the main event (or object or subject) under scrutiny by a researcher. What's more, what is labelled context also has a context of its own. These elements are only actants in a network or, put differently, they are actor-networks. They become more strategic as they command more connections and later lose their importance when connections drop. Lastly, whereas most surfaces have an inside, an outside, and a boundary in between, a network is all boundaries. An element of a network is either connected to another one – thus expanding the network, or it is not.

The elements awaiting a connection to a network, elements that are not yet formatted, measured, covered, surveyed, mobilized or subjectified are called plasma (Latour 2005). In the Big Bang cosmology, the whole universe was plasma prior to recombination (or reassembly?). Today, it is believed that the sun, most stars and a

significant fraction of the interstellar medium is in the plasma state (Gurnett and Bhattacharjee 2005). Of course considering my lack of skill in astrophysics, I am not suited to challenge this claim. Yet using it as a black-box turns out to be very useful, if only because it defines plasma as a high energy state, thus making it more consistent with ANT precepts. For Latour then, even though plasma stands in between the meshes of the networks, it is not made of a single social material. Plasma refers to the many different possibilities that are still unknown at this point, which are in a highly unstable state, so that they can rapidly be assembled to emerge as an actor-network (Latour 2005).

Assumptions about the Nature of Society

One may think at this point that stability is not of interest to Latour, as his whole theory revolves around agents acting and opening black boxes (i.e., disputing matters of fact), which very often are closed too quickly. It would then be tempting to conclude that his theory falls on the radical change side of the Burrell & Morgan matrix (1979). This would however be inaccurate since ANT is indeed searching for order, rigor and pattern. As Latour puts it:

> The task of defining and ordering the social should be left to the actors themselves, not taken up by the analysts. This is why, to regain some sense of order, the best solution is to trace connections between the controversies themselves rather than try to decide how to settle any given controversy. [...] [The search for order] is simply relocated one step further into abstraction so that actors are allowed to unfold their own differing cosmos, no matter how counter-intuitive they appear. (Latour 2005, p. 23)

Also in line with ANT, the asymmetries of resources at the basis of power and domination are not generated by social asymmetries in the general understanding of the expression, since no social material exists (social #1). Instead, power and domination are themselves assembled and are the result of a process (social #2). Latour stands against critical sociologists who claim that the same "groups" are systematically at a disadvantage, or put differently, that society weighs disproportionably on some parts and that it is submitted to inertia. Therefore Latour assumes the nature of society to be based neither on regulation nor on radical change and presents in ANT a clever mix of both states, stressing that it is in letting the agents expose the latter (controversies) that the former (consensus) will emerge (although possibly for very short periods of time). Is this position surprising considering that nature (just as society) for Latour is the consequence of human scientific and technical work (deploying realities)?

Opinions about Epistemology

Latour's opinion about epistemology is at the centre of a whole book (Latour 1991). In it, he stresses that neither the modernists' way of dividing the world between the Social and the Nature, nor the third path offered by the post-modernists in Language are appropriate for making sense of everyday life. These separations are totally artificial since actor-networks are "simultaneously real, like nature, narrated, like discourse, and collective, like society" (Latour 1991, p. 15).[16] Latour does believe that sciences are objective – after all they are about objects – and does not believe that

[16] Free translation from the French text.

flexibility is introduced by multiple interpretations shaped by human desires, meanings or intentions. He is therefore more objectivist than interpretativist. Yet, as we have seen above, he also places great importance upon constructions, which would draw him back towards the left side of the continuum. In fact, Latour maintains that sociology must strive to become fully relativist, a term that stands in opposition to absolutism. His conception of relativism, which he often calls relativity, is borrowed from Deleuze who wrote: "Relativism in not the relativity of truth but the truth of relation." (Deleuze 1992, as quoted in Latour 2005) Thus being able to shift from one point of view to another and being able to connect observations together, that is how relativism must be applied to research, not by imposing unquestionable viewpoints (with matters of fact).

Ontological Beliefs

In light of what was written above, it is difficult for Latour to use the term ontology to which he prefers ontologies, a neologism that better fits the multiple realities that could result from assemblies. Ontologies then are not concerned with the essence of the world as it exists at the moment, but with the essence of the world in its becoming, the reality as transitional, as trajectories of creation having multiple possible outcomes. And these trajectories are built through propositions, i.e., the opportunities for entities to get in contact and interact with one another.[17]

[17] Latour does not use the term proposition in its usual epistemological sense, as something deemed either true or false. He uses instead the ontological sense elaborated by Whitehead and prefers the term

What distinguishes one proposition from another is not the reconnection of some words to a world through reference and judgment (the usual nomimalism vs. realism debate), as this ends in a sterile situation where statements aim for forever inaccessible correspondences. For instance, the phrase, "lactic fermentation" will never be fermenting for real because the phrase *is not* the reality. Propositions are based upon the articulation of differences that render new phenomena visible. It allows the lactic fermentation to be *considered as* a living organism (Latour 2007) and this ontology therefore opens an unlimited number of new possibilities, hence the term ontologies.

Summary

The main precepts of Bruno Latour's ANT were presented in this chapter. First, basic terms such as social, construction and nature, were redefined "à la Latour." Second, the notion of association (assemblage) was introduced. We learned about their transient nature, i.e., associations are forming and dismantling constantly. We also learned that associations were made of both human and non-human actants, and that actants are constantly subjected to a network of other actants who mediate their course of action. Third, we learned that an ongoing controversy is a fertile ground for associations to be traced by ANT researchers, as it is most often the theatre in which matters of concern will be played out.

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statement to designate an epistemological proposition. See Whitehead, A. N. 1995. *Procès et réalité: Essai de cosmologie*, Gallimard, Paris.

Despite his fondness for controversies, Latour is interested in studying stability, as he sees these moments as exceptions to the rule. ANT is therefore based on a clever mix of regulations and radical change. Epistemologically, it stands firmly against the division of the world into three distinct camps: nature, society and language. He contends that actor-networks can very well be real, narrated and collective at the same time. Finally, Latour prefers the neologism ontologies to its singular declination. This results directly from the multiplicity of possible assemblies.

In fact, Latour dislikes how the modernists tend to speak of epistemology, ontology, psychology and theology as completely separate notions, as if nature were necessarily "outside," the spirit "inside," the social "underneath," and God "above." For him, these notions rather go hand in hand, aiming at the same settlement.

Bourdieu vs. Latour

Can they not meet in the middle?

BOURDIEU has often been criticized for being more of a structuralist than he professed (Calhoun 1993), whereas Latour has often been criticized for having no interest whatsoever in pre-existing structures (Fuller 2000). How then can we reunite these authors' opposing views into an overarching theory? This is important because, at first glance, these two philosophers can appear miles apart in their thinking. The purpose of this chapter is to disprove this. Before embarking on this compare and contrast journey, this chapter skims over some of the protagonists' own thoughts about each other, since they were both compatriots and contemporaries before Bourdieu passed away in 2002. Then, it introduces several similarities as well as a few crucial differences between the theory of practice and the actor-network-theory. Of course, similarities and differences being ideal-types and the world being what it is, some differences end up in the similarities section and vice versa. Finally, the last section explains how the two theories are reconciled and applied in the present thesis.

Duelling Academics

Bruno Latour's opinion about Pierre Bourdieu is somewhat ambiguous. In *Reassembling the Social*, he alternately praises him – maintaining that *Outline of a*

Theory of Practice is an "insightful book" and that the habitus is an "excellent concept" – and criticizes him – arguing that one (pointing explicitly to Bourdieu, Anthony Giddens and Erhard Friedberg) cannot claim the existence of a happy medium between two non-existing positions, since it is logically also non-existing (Latour 2005, pp. 101n, 209n, 169). On the whole, Latour believes that Bourdieu fell into his own trap when he started to reify his theoretically virtual structures in his work and force each situation into a small number of fields. He especially deplores the fact that, towards the end of his life, Bourdieu started to be more politically involved in order to alleviate the social suffering he had been analyzing for so many years (Latour 1998b).

Pierre Bourdieu's opinion about Latour is no less antagonistic. He briefly refers to one of his books[18] in *An Invitation to Reflexive Sociology* (Bourdieu and Wacquant 1992, p. 223), writing that "part of the craft of the scientist is acquired via modes of transmission that are thoroughly practical," and as such, supporting his own theory (of practice). But the essence of his critique of Latour is found throughout *Science of Science and Reflexivity*, one of his last publications. In it, he refers to Latour as standing at the border of sociology and philosophy and thus as someone who can profit from symbolic capital on both sides in order to impose his own views.

To sum up, despite the criticisms from both sides, the two theories are not incompatible. On the one hand, Latour highly respects the writings of the early Bourdieu and does not dismiss his major ideas. On the other hand, Bourdieu offers

[18] Latour, B. and S. Woolgar. 1986. *Laboratory Life: The Construction of Scientific Facts*, Princeton University Press, Princeton, NJ, 296 p.

more of an *ad hominem* argument towards Latour, never really addressing his theory. The next section describes the similarities and differences between the two theories.

Similarities

Panoramas vs. Fields, or how to relocate the global

It was mentioned in the previous chapter that in ANT, context does not really exist as something bigger or more encompassing than the event (object or subject) under scrutiny. Context is nothing more than a connection added to existing interactions. It is at once feeding the interactions and feeding itself on them. As sociologists of the associations, we must get used to the flatness of the landscape and avoid the usual leap of faith that is usually made from the local to the global. Latour elaborated a series of useful clamps in order to help us succeed in this venture.

In order to analyse the tiny and enclosed sites (i.e., the actor-networks) that absorb the global, the contextual, and the structural in ANT, Latour proposes a first clamp: the oligopticon. In opposition to Foucault's panopticon which are premises providing complete views and allowing total surveillance, oligoptica are sites providing very limited yet very precise views.

Although Latour urges us to get closer to the action by entering into the space of the oligopticon, which allows us to assess the associations very thoroughly, he also stresses the need to see the story as a whole from time to time. The clamp he offers to achieve this is the panorama. Just like the 360° cinema or the wide-angled camera bearing the same name, a panorama is a site that sees many things, yet nothing in great detail. These panoramas must be employed with reservations given that their coherence and completeness might foster blind, local and partial viewpoints (Latour 2005).

Latour's panorama is very similar to Bourdieu's field, as they both serve to frame and organize the world we live in. The early Bourdieu's fields are plural and virtual, meaning that each individual belongs to many fields at the same time, and that these fields are not fixed by any rule. In a similar way, panoramas are meant to be additions to the multiplicity of sites already present on our flat landscape. Neither of them describes a unitary world as they rather provide narratives that prepare ANT researchers for the ultimate task: progressively composing the common world.

Plug-ins vs. Habitus, or how to redistribute the local

Plug-ins, patches and applets are circulating *individualizers* that interact with human actors in order to "complete" them and allow them to interpret situations. As Latour puts it: "To be a realistic whole is not an undisputed starting point but the provisional achievement of a composite assemblage" (Latour 2005, p. 208). Plug-ins do nothing by

themselves. Just as their Web equivalent activates what was invisible to our eyes a moment before, plug-ins trigger suitable actions from human actors. They are supplementary souls, as Latour calls them and as such, they help us make sense of the world. Latour gives as an example of easily traceable plug-ins, official and legal papers designating an individual as *someone*. Yet other plug-ins are more difficult to grasp as they are more intangible. The know-how coming from your grand-mother enabling you to bake scrumptious pies, the countless books you read in order to better understand your kids, the speech you heard in a movie that changed the way you face the world, in fact all the things that define you as an individual or as Latour writes, "the origin of each of your idiosyncrasies" are the results of plug-ins. (Latour 2005, p. 209)

Now compare this with Bourdieu's notion of habitus. As seen in chapter 3, habitus is the dispositions that allow an individual to move, act and "go on" according to the position occupied in the social space, and according to the logic of the field and the situation in which he is involved. Latour himself wrote that "Bourdieu's notion of habitus, once it is freed from its social theory, remains [...] an excellent concept" (Latour 2005, p. 209n). Once it is freed from its social theory, this is the sinews of war. In order to better understand this, let us present an alternative definition for habitus. Habitus is a process of improvisation that emerges through progressive interactions with various social fields (Postone, *et al.* 1993). Considering the explanations provided so far about ANT, it should not come as a surprise that the main difference between plug-ins and habitus resides in the meaning one gives to "social fields." In conformity with the sociology of associations, the phrase must not refer exclusively to "the same

small repertoire of standardized forces" (Latour 2005, p. 260), but rather to the associations in the making, the actor-networks, whether they are looked at from an oligoptic or a panoramic standpoint.

Habitus is a complex concept. Being interiorized and incorporated within individuals, it is quite difficult to access. Within ANT, this problem does not arise, as we are rescued by *articulators,* these non-human actors working hard at redistributing the local sites via all sorts of vehicles leaving traces for the researcher to follow. As Latour puts it:

> The powerful insight that most of the ingredients of the situations are 'already' in place, that we simply 'occupy' a predetermined position 'inside' some preformatted order, is always due to the transportation of a site into another one at another time, which is produced by someone else, through subtle or radical changes in the ways new types of non-social agencies are mobilized (Latour 2005, pp. 193-4).

Interestingly, the quote above does not negate a certain form of Bourdieuian structuralism and rather offers an explanation for it. In light of this, it is believed that individualizers and articulators are two concepts that supplement habitus without altering its essence.

Matters of Fact vs. Symbolic Violence, or how to stop controversies

A fact is what becomes stabilized during a controversy through a collective agreement (Latour 1995). Conversely, a matter of fact is something that cannot be challenged. As

seen in the previous chapter, the tendency to impose things as black boxes is often based on a generalized misrecognition of things as being either social or natural. Yet for Latour, society and nature do not explain anything when taken as causes for they are rather the consequences of stabilized controversies (Latour 1991; 2004).

Let me be quite clear about this, at the risk of repeating myself. Latour's refusal to acknowledge society and nature does not mean he repudiates subjects and objects. He is rather urging us to give back to the objects their voices as subjects, to bring them back into our analyses as full-fledged actants. This is important. It is the object that has a voice, not the human actor who subjectively interprets a world of inflexible objects or of strictly material connections (Latour 2005). In order to achieve this task, the researcher must become aware of the political renderings of matters of concern which end up too easily as matters of fact.

The parallel with symbolic violence becomes evident through expressions such as generalized misrecognition and political renderings. Remember that symbolic violence is the power to impose some instruments of knowledge and communication of social reality so that they are misrecognized as fully legitimate.

Is this to say that every matter of fact is a manifestation of symbolic violence? The answer to this question can be found in an article published in 2004, where Latour reflects upon the recent proliferation of conspiracy theorists who artificially maintain controversies[19] using the exact same tool Latour used to assemble the social. Whereas

[19] In saying for instance that there is no such thing as global warming, that no plane ever struck the Pentagon on 9-11, or that the Twin Towers destroyed themselves under their own weight.

Latour aims at emancipating the public from naturalizing objectified facts too rapidly, the conspiracists intend to mislead the public by destroying hard-won evidence. As Latour puts it: "[T]he danger [is] no longer [...] coming from an excessive confidence in ideological arguments posturing as matters of fact – but from an excessive *distrust* of good matters of fact disguised as bad ideological biases!" (Latour 2004, p. 227)

In light of the above, we cannot assert that every matter of fact is an expression of symbolic violence, yet it is possible to establish that every expression of symbolic violence is based on a matter of fact. Sometimes, as with conspiracy theorists, a matter of fact is debunked and re-established as a matter of concern it is true. The matter of fact at the basis of symbolic violence thus becomes the allegation of the lack of scientific certainty of the initial (hard-won) scientific facts. When such an attempt comes from an unknown individual and/or is published in an outlet that is not credible, no great harm is done. Yet when it is the fruit of a prominent intellectual such as Jean Beaudrillard,[20] it certainly falls under the realm of symbolic violence.

How can we cope with this new reality and regain the mastery of our tools? To this question, Latour answers that "[t]he critic is not the one who debunks, but the one who assembles" (Latour 2004, p. 246), and as such, he proposes simply getting closer to facts instead of away from them, nearer to the conditions that made them possible. To succeed, the ANT researcher has to renew with empiricism and show great interest in expressions of symbolic violence (or matters of fact) arising during controversies.

[20] Who incidentally published The Spirit of Terrorism: And Requiem for the Twin Towers in 2002.

The Researcher as an Actor-Network vs. Reflexivity, *or how to take part in the controversy*

"The fate of facts and machines is in later users' hands; their qualities are thus a consequence, not a cause, of a collective action" (Latour 1988, p. 259). This is the first principle stated in *Science in Action*, one of the first books written by Latour that introduced science studies through many concepts of what has become known as ANT. In fact, this leads back to my introduction in the previous chapter, where I admitted that I was an actor-network mediating Latour's work in my own fashion in this thesis. Later in *Reassembling the Social*, Latour writes: "For the sociologists of associations, any study of any group by any social scientist is part and parcel of what makes the group exist, last, decay or disappear" (Latour 2005, p. 33).

Now in the third chapter, it was said of Bourdieu's reflexivity that it is epistemological – it objectifies the relation between the subject and the object, collective – it investigates and reflects the organizational and cognitive structures of the discipline hidden in the theories, definitions and taxonomies used by the subject, and anti-narcissistic – it reveals the epistemological unconscious of the researcher's discipline rather than his/her own unconscious.

Again, despite Latour's constant grumbling about reflexivity, as generally used by the sociologists of the social, I do not believe that the two notions in this section are at odds. First, objectifying the relation between the subject (me) and the object (the research) can be seen as accounting for my association with the topic of my research and the way in which it influences the chain of moderators I choose to present in my

narrative. Second, reflecting organizational and cognitive structures of the discipline hidden in the tools used to study my topic is a direct consequence of them having been collectively assembled previously and associated with me in my curricula. Finally, how could I be revealing my own unconscious rather than the epistemological unconscious of my discipline if I am an actor-network owing my existence in part to my link with this discipline?

The biggest difference between the two notions can be explained by the absence of the outside/inside dichotomy in ANT noted in the previous chapter. It is well summarized by Latour when he writes: "Although in the first school [the sociology of the social] actors and scholars are in two different boats, in the second [sociology of associations] they remain in the same boat all along and play the same role, namely group formation" (Latour 2005, p. 34). Apart from this, Bourdieu's reflexivity and the researcher being an integral part of what she is studying are fairly analogous notions.

Main Differences

Whereas the previous section presented concepts from Bourdieu and Latour that were seemingly different but were quite similar in essence, the present section introduces two concepts that are deemed problematic with Bourdieu and where Latour's theory can help.

Breaking the Circle of Reproduction

The first of these concepts refers to one of the most common criticisms made about Bourdieu's theory of practice, namely the impossibility for an individual to free himself from the existing structures and thus break the circle of reproduction.

Throughout his work, Bourdieu maintains that social structures are constantly in process and subject to change. Yet as written in chapter three, the structured structure produces structuring structures that will persist in the long run through actions, thoughts, feelings and sensitivity. How can we break free from this inextricable situation? The notion of social trajectory is said to affect habitus and thus allows for the modification of the structures. According to Bourdieu, social trajectory is the series of positions successively occupied by a certain agent in a field. The epithet social, as defined by the sociologists of the social, refers to local face-to-face interactions (social #3) that become far-reaching and durable over time (Latour 2005). It is in studying these interactions that we find the trajectory. What if we would apply the definition of the social #2 instead? The social would then become the associations occurring at every moment between things that are not social, and it would be in retracing these associations that the trajectory would emerge. Again, this sounds extraordinarily familiar.

Interestingly, when dealing with the problem of (non)reproduction, Bourdieu often refers to times of crisis, where the fit between objective structures and subjective expectations is questioned. Consider this quote from Crossley about Bourdieu's conception of crisis: "During crises a number of previously doxic assumptions enter

the realm of discourse and certain previously discursive issues either become doxic or lose relevance and drop out of public discourse" (Crossley 2003, pp. 48-9). Now, let us translate this with ANT terminology: During controversies, a number of matters of fact are (re)disputed and certain matters of concern are stabilized into matters of fact, or they lose their connection with the network. Needless to say, the two sentences are very close in meaning.

If these notions are so similar, why then place them in the "difference" section? Because in order to bring them closer together, the social #1 and #3 have to be replaced with the social #2. This is very important as in doing so we welcome the non-human actors into our landscape. While it is very difficult to account for the social trajectory of our protagonists without complete knowledge of their past (remember that only humans are implied in the socials #1 and #3), it becomes a lot easier to trace their encounter with events, written reports, other technologies and even books, through their own testimonies during the controversy.

While transformation is almost impossible in Bourdieu's theory of practice, it is at the basis of Latour's actor-network-theory. Using ANT to describe what is happening within fields (or panoramas) helps us study social movement, something that was rather difficult with Bourdieu's concepts only.

Doing Critical Research

The second challenging concept refers to the conception of power and how to be critical in our research. As mentioned before, domination is a central notion in Bourdieu's sociology, as he seeks to understand why dominated agents are disposed to accept the domination of others. Latour stands up to this way of thinking considering that it tends to explain the domination patterns always reusing "the same old repertoire of already gathered social ties" (Latour 2005, p. 260) and thus participating in their expansion.

For Latour, it is the progressive composition of the common world that is seen as a political task. While the progressive composition of the common world is achieved by tracing the associations and assembling them satisfactorily, the way to do this politically is by re-composing the content of power from the observation of the actor-networks rather than explaining it from imposed frames.

Similarly, it was mentioned above that Latour stood against Bourdieu's critical research because it tended to explain every situation of domination the same way. But this is not the only way of doing critical research. In a paper published in 2002, Doolin and Lowe demonstrate that to reveal is to critique. Referring to ANT, they argue that the empirical inquiries where the tracing and recording of heterogeneous relations of networks are performed, as well as the rich descriptions these inquiries bring about "[offer] the hope of a more fundamental appreciation and critique of the underlying relationships that pervade contemporary society" (Doolin and Lowe 2002, p. 76).

(Re)?conciliation

First, I believe that using Bourdieu's theory of practice in order to divide the story recounted by the actors themselves into different fields – or to put it in Latour's jargon, in order to observe the actor-network from distinct panoramas – respects actor-network-theory precepts. In a very pragmatic way, it allows me to chew the situation in smaller bites to use a familiar image. Once this first step is accomplished, ANT obviously comes to the forefront because of the need to get closer to the action, which is more difficult to achieve with Bourdieu's theory of practice.

Second, although Latour stands against post-modernists and their perpetual search for sense and signification within the words of the discourse, which is in a certain way what Bourdieu calls for, in a qualitative thesis done with secondary data only, words are everything I have. The key here is to locate intriguing words and take them as flags indicating the presence of interesting things to scrutinize. I believe this is consistent with Latour when he asks that we let the story unfold and speak for itself. It is simply that rather than being direct, the observation of the field is performed through a proxy, i.e., the corpus of texts describing from different points of view.

Lastly, considering that the term conciliation derives from the Latin word *conciliare* which means to assemble, and further considering that assemblies or associations are at the core of ANT, I admit – possibly quite naïvely – that as of now, my understanding of the world is tainted by both Bourdieu and Latour and that I cannot really lay this aside. Their theories were plug-ins in my life and ultimately, it is I who reconcile them, through the mediation I inflict as an actor-network. The prefix re here

simply symbolizes the fact the assemblage takes a new form every time someone decides to embark on such a journey.

Summary

This chapter compared and contrasted Pierre Bourdieu's Theory of Practice with Bruno Latour's Actor-Network-Theory. I basically showed that the two theories were not that far apart from one another. Cognitive parallels were made between fields and panoramas, matters of fact and symbolic violence, as well as actor-network and reflexivity. Furthermore, some of Latour's concepts were shown to supplement Bourdieu's ideas, for instance in offering ways to break into the circle of reproduction or in allowing critical studies to be performed differently.

About the T in ToP and ANT

[rē-'flek-'si-və-tē] 2

HERE I am, facing the T word. Theory, the *bête noire* of all Ph.D. students at one point or another. Whether it is theory as in "a coherent statement or set of statements that attempts to explain observed phenomena", or theory as in "a logical structure that enables one to deduce the possible results of every experiment that falls within its purview,"[21] a number of questions are awaiting at the corner. Are you building a theory? Are you testing a theory? Are you trying to falsify a theory? Soon after usually come the questions about variables... Yes, Theory of Practice and Actor-Network-Theory both contain this somewhat cursed word, although both Bourdieu and Latour acknowledge that they use it rather loosely. What is more, both of them felt at one point the urge to set the record straight about the term.

Bourdieu's standpoint on the matter was related by Loïc Wacquant in *An Invitation to Reflexive Sociology* published in 1992. It goes as follows:

> Like method, theory properly conceived should not be severed from the research work that nourishes it and which it continually guides and structures. Just as he rehabilitates the practical dimension of practice as an object of knowledge, Bourdieu wishes to recover the practical side of theory as a knowledge-producing activity. (Bourdieu and Wacquant 1992, p. 30)

[21] Both definitions were taken from Wiktionary, the wiki-based open content dictionary available at http://en.wiktionary.org/wiki

Later on Wacquant added, talking about Bourdieu:

> His own relation to concepts is a pragmatic one: he treats them as "tool kits" (Wittgenstein) designed to help him solve problems. (Bourdieu and Wacquant 1992, p. 31)

As for Latour, he explored the four difficulties or actor-network-theory, namely the words "actor", "network", "theory" as well as the hyphens in a well know keynote speech in 1997, which later made it into a book under the title *On recalling ANT*. About theory, he said:

> The third nail in the coffin is the word theory. As Mike Lynch said sometimes ago, ANT should really be called "actant-rhyzome ontology" but who would have cared for such a horrible mouthful of words, not to mention the acronym ARO? Yet, he has a point. If it is a theory, it is a theory of what? (Latour 1998a, p. 19)

To which he added later on:

> Far from being a theory of the social or even worse an explanation of what makes society exert pressure on actors, it always was, and this from its very inception, a very crude method to learn from the actors without imposing on them an a priori definition of their world building capacities. (Latour 1998a, p. 20)

In a more recent book published in 2005, Latour depicts ANT as a negative argument, i.e., a theory about "how *not* to study [things] – or rather, how to let the actors have some room to express themselves." (Latour 2005, p. 142)

Both authors define theory in a way much closer to methods than to the conventional definition in academia and the analogy of a tool box seems appropriate here. However, Latour goes one step further saying that ANT is not really a tool...

> (...) or rather, because tools are never "mere" tools ready to be applied: they always modify the goals you had in mind. That's what "actor" means. Actor Network (I agree the name is silly) allows you to produce some effects that you would not have obtained by some other social theory. (Latour 2005, p. 143)

So for both authors, what matters is what you do with the theory or, put differently, how you use it empirically, hence the key word "practice" for Bourdieu.

Methodology and Research Approach

> [T]HE construction of an object – at least in my personal research experience – is not something that is effected once and for all, with one stroke, through a sort of inaugural theoretical act. The program of observation and analysis through which it is effected is not a blueprint that you draw up in advance, in the manner of the engineer. It is, rather, a protracted and exacting task that is accomplished little by little, through a whole series of small rectifications and amendments inspired by what is called le métier, the 'know-how', that is, by the set of practical principles that orients choices at once minute and decisive.
>
> (Bourdieu and Wacquant 1992, pp. 227-8)

The present chapter revisits Bourdieu's theory and Latour's theory, now presenting them as method. First, Bourdieu's three levels of construction of a research object are presented and applied to a certain extent to the case. Second, Latour's guiding principles for conducting research are exposed. Third, the acts of reflexivity that must accompany a Bourdieuian exercise are explained. Fourth, the corpus at the basis of this dissertation is introduced. Finally, the last section presents the most adequate criteria to evaluate the present research.

Constructing the research object

When conducting Bourdieuian research, we need to avoid falling into the common traps of "empty theory" or "blind research" and we must direct a special attention to words. This is because common language is the repository of taxonomies, names, groups and concepts from past generations; it is a social construction that is often taken for granted by researchers and that gives rise to common sense views of phenomena as well as common academic constructs of them. Pre-constructed concepts are reused over and over and, as a result, the structure is reproduced (Grenfell and James 1998b). A break with common sense is therefore required and radical doubt must be expressed (Bourdieu and Wacquant 1992).

In other words, in doing social praxeology, pre-constructions have to be bracketed, much as in the phenomenological method. Once such a rupture with common sense has occurred, the researcher must develop an interpretation of the research object in relational terms. Since for Bourdieu, "relation" is a feature of both the research phenomenon and of the researcher vis-à-vis the researched, the best way to apply a relational view is, according to him, to construct the research object in terms of fields and habitus and to be reflexive.

Analyzing Fields and Habitus in Three Levels

As mentioned in chapter three, social praxeology calls for a double reading of the field. The first reading is based on an objectivity of the first order; it is concerned

with what can be observed, measured, and mapped – the positions. The second reading is based on an objectivity of the second order; it is concerned with categories of perception and appreciation and lived experiences – the dispositions. In order to avoid confusion, these two readings must be paired with the three levels mentioned by Bourdieu as necessary to conduct a study of a field (Wacquant 1989; Bourdieu and Wacquant 1992). The first level calls for the analysis of the field's position in relation to the field of power whereas the second step calls for the mapping of the objective structures of relations between the agents who compete for capital in the field. These two levels of analysis together form the two moments of the objectivity of the first order, they are both concerned with positions. The third level calls for the analysis of the habitus of the agents and is thus directly related to the objectivity of the second order.

Level 1: Objectivity of the First order - Power analysis

The field of power is this "space of play that holders of various forms of capital struggle in particular for power over the state, that is, over the statist capital that grants power over the different species of capital and over their reproduction (via the school system in particular)" (Bourdieu and Wacquant 1992, pp. 114-5, emphasis in originals).

For the present research, this "power analysis" more or less consisted of an evaluation of the main capital at stake in the different fields that emerged from the story and a drawing of their approximate positions in the field of power.

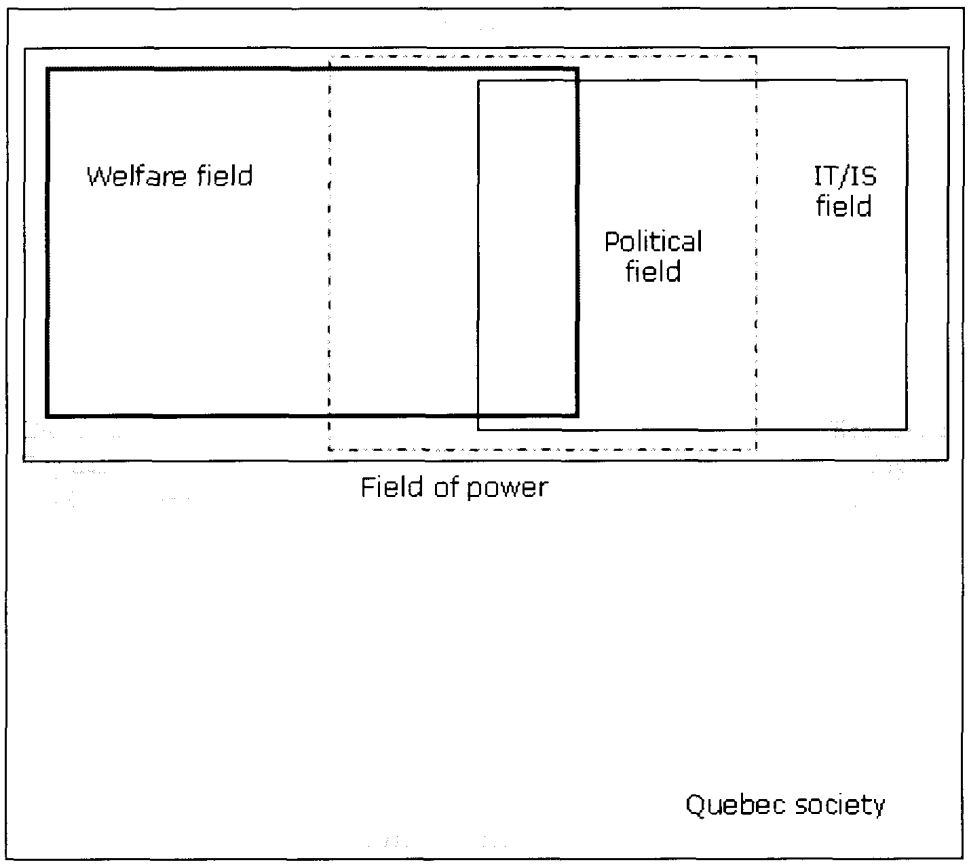

Figure 6 – Representation of the Fields Within the Field of Power

Level 2: Objectivity of the First order – Relationship Mapping

Mapping out the objective structure of relations between the positions occupied by agents who compete within the field is what must be done here. The first step of this stage is therefore to list the stakeholders who took part one way or the other in the

CpSQ project. Participants to the public hearings, government officials concerned with the project throughout the years, and consultants who wrote public or private reports on either one of the pilot projects or on the general notion of deploying a health information infrastructure in Quebec are all considered stakeholders for this thesis.

Ideally as a second step, descriptive statistics could have been collected on the different groups or associations who took part in the project and factorial correspondence analyses, an interdependence technique conceived to analyze large contingency tables, could have been performed in order to position relationally the participants in the different fields. Considering that comparable statistics were impossible to gather for all the groups/associations who participated in the controversy, a simpler "square table of pertinent properties" was built to classify the participants on a number of characteristics (Bourdieu and Wacquant 1992, p. 230). Table 4 presents an excerpt of this table for some 17 individuals or groups that participated to the consultations. A quick look at it shows that the stakeholder type appears to be a good discriminator for the construction of the fields. Four panoramas would then be visited: the steward' one, the users' one, the beneficiaries' one and the counsellors' one.

Stakeholder	Stakeholder Type	Main Type of Capital
Elected Government	Steward	Symbolic / Political
Opposition Party	Steward	Symbolic / Political
CMQ	Users	Symbolic
OPQ	Users	Symbolic
AHQ	Users	Economic
FMSQ	Users	Economic / Symbolic
FMOQ	Users	Economic / Symbolic
FMRQ	Users	Economic / Symbolic
FIIQ	Users	Economic
CMQ	Beneficiaries	Economic / Health
ADQ	Beneficiaries	Economic / Health
COOID	Beneficiaries	Social / Economic
AGIDD-SMQ	Beneficiaries	Social / Economic
CNQ	Counsellor	Cultural
BQ	Counsellor	Cultural
Mrs. Prémont	Counsellor	Cultural
CGI	Counsellor	Economic
...	...	...

Table 4 – Excerpt of the Square Table of Pertinent Properties on Characteristics

Level 3: Objectivity of the Second Order

As mentioned by Bourdieu himself, "the field of positions is methodologically inseparable from the field of stances or position-takings (*prises de position*), i.e., the structured system of practices and expressions of agents" (Bourdieu and Wacquant 1992, p. 105). Thus for this third level of analysis, another "square table of pertinent properties" was built from the main ideas found in each brief in order to discriminate the participants this time on their arguments (Bourdieu and Wacquant 1992, p. 230). From this second table, variables corresponding to the issues debated (position-takings) and main position towards the project were investigated, amongst other things.

Table 5 presents this second square table. As can be seen, it is difficult to make sense of the associations based solely on the main issues debated and the position adopted by each protagonist towards the project. What is more telling is the main focus adopted by the different stakeholders in both their brief and testimony. This was emerging from the language used, which was very political for certain, very technical for others, and centred on rights for a third group of stakeholders. Of course, a few of them used a mix of different languages but for most, there was a clear inclination towards one type over the two others. Of course, both the Elected Government and the Opposition Party used all three languages considering that they had to confront each and every group or individual who presented in front of the Commission.

Stakeholder	Main Issue Debated	Main Language Adopted	Position Adopted Towards the Project
FIIQ	Administrative vs. Clinical Opting-out Surveillance Committee	Political	Ambiguous
Mrs. Prémont	Conformity to Other Laws Administrative vs. Clinical	Political	Not in Favour
Mr. Péladeau	Not so Public Consultation Missing documentation	Political	Not in Favour
RIOCM	Administrative vs. Clinical Consultation Process	Political	Not in Favour
CRCQ	Government Priorities Administrative Controls	Political	Not in Favour
Mrs. Mino	Computerization in General Free and Informed Consent Consultation Process	Political / Rights	Not in Favour
COPHAN	Conflict of Interests RAMQ Administrative vs. Clinical Opting-out Free and Informed Consent	Political / Technological	Ambiguous
FMRQ	Long Term Plan Needed Government's Incompetency	Rights	Not in Favour
ADQ	Less Stress Administrative Controls	Rights	In Favour
COOID	Correcting or Removing Diagnoses	Rights	Not in Favour
AGIDD-SMQ	Missing documentation Administrative vs. Clinical No Impact Studies	Rights	Not in Favour
CNQ	Fragmented Consent Correcting of Removing Diagnoses	Rights	In Favour
BQ	Free and Informed Consent Access Card Distribution Surveillance Committee Professional Responsibility	Rights	Ambiguous
CDPDJ	Fragmented Consent Administrative vs. Clinical	Rights	Not in Favour
PC	Fragmented Consent Surveillance Committee	Rights	Ambiguous
Mrs. Farmer	Security Government's Incompetency	Rights	Not in Favour
AOQ	Opting-out Fragmented Consent Professional Responsibility	Rights	Not in Favour

Table 5 – Square Table of Pertinent Properties on Position Takings

Stakeholder	Main Issue Debated	Main Language Adopted	Position Adopted Towards the Project
Dr. Tremblay	Time is Money Access Cards Distribution Administrative Controls	Rights	Not in Favour
Dr. Bessette	Administrative vs. Clinical Privacy Concerns	Rights	In Favour
FMSQ	Administrative vs. Clinical Cost-benefit analysis	Rights / Technological	In Favour
CAI	Centralized Database Opting-out Needs Were not Assessed	Rights / Technological	Ambiguous
AAPI	Fragmented Consent Alternative Technologies Sector-specific Laws Opting-out	Rights / Technological	Ambiguous
Mr. Marinier	Free and Informed Consent Fragmented Consent Public Key Infrastructure Security	Rights / Technological	In Favour
OC	Equilibrium Between Rights Administrative Controls	Rights / Technological	Not in Favour
CMQ	Fragmented consent Time is money *Step 3 before step 1*	Technological	In Favour
OPQ	Opting-out Daily Process Level of computerization	Technological	Not in Favour
AHQ	Access Card Distribution Daily Process	Technological	Ambiguous
FMOQ	Computerization Problems Professional Responsibility Time is money	Technological	In Favour
CGI	Centralized Database Security	Technological	N/S
Mr. Sicotte	Security Outdated Technology Daily Process	Technological	Ambiguous
CCQ	Double Entry Correcting and Removing *Diagnoses* Cost-benefit Analyses	Technological	Ambiguous
ARC-FACEF	Security	Technological	Not in Favour
Cognicase	Centralized Database Security	Technological	N/S
Mr. Brands	Security Centralized Dabatase Encryption	Technological	In Favour
CSQ	Administrative vs. Clinical Profiles on Access Cards	Technological	Not in Favour

Table 5 – Square Table of Pertinent Properties on Position Takings (continued)

Letting the Research Object Construct Itself

In the previous section, Bourdieu's guiding principles to help us construct the research object were presented. Latour is a lot less loquacious when comes the time to offer similar guidelines. For him, a good researcher should let the story unfold and speak for itself, identify the different actants "playing" in the story and trace their history, i.e., their previous encounters with other human or non-human actants.

These principles are opposed to Bourdieu's ones as the respective section titles show. As argued in the previous chapter, this is not irreconcilable and simply asks for a little flexibility. Basically, what it requires is a critical appraisal of the first square table of pertinent properties, the one built upon the group characteristics. According to this table, we should have worked with four fields or discourses. The first would have grouped together all the medical professionals as the "users", the second would have put together all the associations representing the "beneficiaries", the third would have regrouped all the governmental agencies as the "stewards", and the fourth would have merged all the other groups as the "ancillary players".

When looking attentively at how the story unfolded, this structure does not seem to explain any of the position-takings listed in the second square table. As such, I decided not to use it on the basis that some other associations seemed to be more important in the present situation, a choice completely in line with ANT logic. This is what I mean by flexibility.

Finally, Latour also believes that a good description should not need any additional explanation, considering that explanations usually consist in adding actors to an already existing network (Latour 2005). Of course for this thesis, I felt I did need to perform additional analyses in order to apply more directly the ANT notions covered in chapter four. I believe the way I chose to do it does not go against Latour's idea since I did not really explain what had happened. I rather used his tools in order to look at *how* the associations were formed and strengthened throughout the unfolding of the events.

Applying Epistemic Reflexivity

As noted in chapter three, Bourdieu's notion of epistemic reflexivity is epistemological, collective and anti-narcissistic. Specifically, he identifies three types of biases that researchers have to overcome in order to be truly reflexive. The first is the social bias and it results from the researcher's social origin and distinctive characteristics such as gender, class, ethnicity, etc. The second is the field bias and refers to the position the analyst occupies in the academic community, in relation to other scholars with whom they compete for symbolic power. The third is the intellectualist bias and arises from the predisposition of academics to see the world as a spectacle, as interesting phenomena to be analyzed and interpreted rather than as important problems to be worked out in a practical manner (Bourdieu and Wacquant 1992).

More concretely, acts of reflexivity can be sorted into six thematic headings: (1) self socio-analysis, (2) objectifying relationships with the researched, (3) points of theoretical departure, (4) theoretical development, (5) critical engagements and (6) reception in the field (Grenfell and James 1998a, p. 127). In performing self socio-analysis, the researcher identifies his or her own social trajectory and location within various fields, thus revealing part of his or her individual habitus. In objectifying the relationships with the researched, the researcher positions him- or herself in relation to the object of the study. In achieving theoretical development, the researcher attains points of theoretical departure with Bourdieu's social praxeology, and brings into his or her work concepts foreign to Bourdieu's theory, therefore extending it. In critically engaging him- or herself, the researcher performs reflection upon reflection, a recursive process that only will and lack of resource can terminate. Finally, in considering reception within the field, the researcher reflects upon the opinion of others about his or her work based on Bourdieu's theory. It is by submitting themselves to these acts of reflexivity that researchers can avoid the three biases mentioned above and, at the same time, the symbolic violence of imposing an interpretation on reality (Grenfell and James 1998a). In the present thesis, only the first, second and sixth types of reflection are presented as reflexivity exercises. However, the third, fourth and fifth types are also found within this research, although in a less visible way, considering that I complement Bourdieu's theory with ANT.

A few reflexivity sections are included throughout this dissertation. You already encountered two examples so far. They are easily discernable by the use of a specific sans-serif font and a slightly different layout, as the paragraph below shows.

> The quotation at the beginning of this chapter exposes the ongoing and iterative process of selecting adequate analytical tools in order to construct the research object. It is well representative of what I went through during the redaction of this dissertation. Whereas at the proposal stage I was thinking about doing factorial correspondence analyses and discourse analysis, my path completely changed after I attended a conference by Bruno Latour. The discovery of ANT had a profound effect on me. What's more, it offered me an ideal set of tools to further my analysis and prevented me from having to dig into more literature/communication techniques such as semiotics and discourse analysis.

The Data Corpus

As explained in the preamble, I did not have to find one or more cases fitting a research question. It is the case that interested me at first, and the research questions were directly linked to the situation. With the benefit of hindsight, the case was also tailored for ANT, since it was a controversy with active debates, exactly the type of situations favouring the identification of actants and the observation of alliances.

The corpus at the basis of this dissertation is composed of forty-nine briefs submitted to the Social Affairs Commission, the verbatim transcription of the ten days of hearing including the opening and closing speeches, the pre-bill per se, two governmental briefs submitted to the Cabinet concerning the topic, internal documents used by the Health minister in order to prepare for the hearing, the official reports of the two health smart card pilot schemes, as well as close to 300 notices, articles or open letters published in different media (magazines and newspapers) between 1992 and 2004.

I performed four distinct coding iterations. First, I read the texts directly on paper and annotated them, making certain to write down my state of mind and feelings. Then I put everything in N*Vivo for analysis. The coding scheme I used for this second iteration contained items and variables inspired by the literature review. Then the second square table of pertinent properties was built and the texts were re-read on paper once again. My state of mind and feelings were written down a second time and then compared with my initial ones. Finally during the fourth iteration, I re-coded the texts in N*Vivo using broader codes referring to the type of language used, a direct result of the second square table.

Judging the Quality of the Research

In order to prove the value of their results, quantitative researchers usually claim objectivity and then establish the reliability of their instruments, the validity of their measures and the generalizability of their findings. These criteria are based on

positivist assumptions that are rejected by many qualitative researchers. Not surprisingly then, the relevance of those criteria to evaluate qualitative research is also denied by qualitative researchers.

To remedy the problem, many authors have developed sets of criteria to evaluate qualitative research (Kirk and Miller 1986; Maxwell 1992; Golden-Biddle and Locke 1993; Klein and Meyers 1999). Since qualitative research encompasses many different streams (from different paradigms), not all evaluation criteria are adequate for all research approaches. For instance, the papers mentioned above present criteria appropriate mostly for ethnography, hermeneutics or in-depth case studies, and some of them are difficult to apply on perspectives such as social construction or critical theory. Bourdieu or Latour themselves do not offer any specification on what should be considered in judging the quality of research using their theories. However, a close match to their methods was presented by Alvesson and Sköldberg (2000) who argue that there are four levels of interpretation in qualitative research: (1) Interaction with empirical material[22], (2) Interpretation, (3) Critical interpretation, and (4) Reflection on text production and language usage. Table 6 illustrates these four levels, along with their guidelines, the equivalence in Bourdieu's social praxeology and the application for the present research.

[22] Alvesson and Sköldberg define empirical material as "pure data" or uninterpreted "facts" which is representative of most of the data at the basis of this research.

Level	Precept	Social praxeology	ANT	In this research
Interaction with empirical material	Using well-reasoned logic in interacting with empirical material Using rigorous techniques for processing the data	Objectivity of the first order	Let the story unfold and speak for itself	Choosing the right material at the basis of my interpretation Determining adequate fields or panoramas N*Vivo
Interpretation	Presenting a sound interpretation	Objectivity of the second order	Getting closer to the actor-networks	Trying to understand the habitus of participants Retracing mediators
Critical interpretation	Being aware of ideology, power and social reproduction	Analysis of symbolic violence	Matters of concern vs. matters of fact	Not taking anything for granted
Reflection on text production and language use	Reflecting upon our claim to authority and the selection of the voices represented in the text	Epistemic reflexivity	I am an actor-network myself giving an account of the situation	Acknowledging social, field and intellectual bias

Table 6 – The Four Interpretation Levels Applied to this Research

These four levels of interpretation have been juxtaposed to evaluation criteria found in the literature, in order to define a set of relevant criteria to evaluate critical interpretive research in IS (Pozzebon 2004). The first three criteria are taken from Golden-Biddle and Locke (1993) and the fourth from Schultze (2000). They are presented in Table 7. Considering that these criteria were first defined for evaluating ethnographic work and in-depth case studies, the accepted definitions must be slightly modified to accommodate a study based on Bourdieu and Latour.

Criteria	Original definitions	Level of interpretation
Authenticity	The account is genuine to the field experience	Interaction with empirical material
Plausibility	The text communicates well the story and the research is relevant to the concerns of the intended audience	Interpretation
Criticality	The text brings readers to reconsider taken-for-granted ideas and beliefs	Critical interpretation
Reflexivity	Personal details about the author are revealed and interlaced with the ethnographic material	Reflection on text production and language use

Table 7 – The Four Evaluation Criteria and the Related Levels of Interpretation

First, the authenticity criterion assures that the researcher was in the field and that her/his account is genuine to the lived experience. In a study conducted with secondary data such as the one proposed here, this criterion seems irrelevant at first glance. However, in talking about case studies, Walsham (1995) states that sometimes researchers report evidence based on their interpretations of other participants' interpretations of the phenomenon investigated. This means that immersion is not totally necessary. In line with Walsham's reasoning and with the reflection of Pozzebon (2004), I believe that the access to archival documents in great numbers compensates for the lack of direct immersion in the field. Accordingly, the definition of the authenticity criterion used here is: "the account is genuine to the unfolding of the events, as reported in the empirical material studied."

The second criterion in need of modification is reflexivity. This is because this criterion was originally defined by Schultze (2000) for evaluating confessional

research. As mentioned earlier, Bourdieu's conception of reflexivity is broader and must encompass field and intellectualist biases in addition to usual social bias. As such the definition of the criterion used here is: "Details about the social bias, the field bias and the intellectualist bias that are revealed and interlaced with the story recounted and the analysis presented".

Criteria	Modified definitions	Level of interpretation
Authenticity	The account is genuine to the unfolding of the events, as reported in the empirical material studied	Interaction with empirical material
Plausibility	The text communicates well the story and the research is relevant to the concerns of the intended audience	Interpretation
Criticality	The text brings readers to reconsider taken-for-granted ideas and beliefs	Critical interpretation
Reflexivity	Details about the social bias, the field bias and the intellectualist bias are revealed and interlaced with the story recounted and the analysis presented	Reflection on text production and language use

Table 8 – The Four Evaluation Criteria with the Modified Definitions

I believe that these four criteria are suitable to evaluate the present research. They have been well accepted and used within the IS and management academic communities for years although for different types of methodologies, mostly ethnographic inquiry and case studies. Slight modifications were made to two of them in order to tailor them for a study based on Bourdieu and Latour.

Summary

A big advantage of the method at the basis of this thesis is the mere absence of questions from the researcher in order to bias the participants' answers. Briefs were written on a voluntary basis and covered the issues they considered the most important, and that forms the basis of the study, not the answers to the pre-constructed ideas of the researcher transformed into questions. The fact that so many secondary documents were available to inform the project made this dissertation all the more satisfying to complete.

In this chapter, both Bourdieu and Latour were revisited, this time as methods to conduct critical research. Bourdieu's three levels of construction of a research object were presented, as well as Latour's guiding principles. The notion of reflexivity was explained and the corpus at the basis of this dissertation was introduced. Finally, evaluation criteria adequate for critical research were presented.

As for the analysis, four distinct coding iterations allowed me to derive three distinct discourses, each representing a different panorama of the same situation. These discourses were analyzed with Bourdieu's concepts in chapter eight, nine and ten, and were then complemented with a more Latourian take on the situation in chapter eleven. This somewhat large detour allowed me to perform further analyses in relation to MIS theories in chapter twelve and thirteen.

Section II

A guided tour of the Quebec Health Card project.

Introduction to Section II

In this second section, I propose a guided tour of the Quebec Health Card project. First, just like a tourist planning a trip to a foreign city needs to know a minimum of facts about the chosen destination before departure, the reader of this thesis needs to know some basic facts about the CpSQ project before embarking into a more serious venture. Chapter seven therefore presents a "neutral" version of the project, based mostly on newspaper clips bearing no editorial content, and on official press releases from the government. Then the real tour begins as each of the three following chapters, eight, nine and ten, stops in turn at a different observatory and proposes a distinct panoramic view of the project. Also just as the guide sometimes departs from the official script written by the tour promoters in order to share personal stories in relation with the scenery, reflexive segments are inserted throughout between these chapters in order to account for the different biases that may tint the expedition. Finally, like the tourist who, once back home, wants to know more about the visited city and decides to read more about it (for instance in retracing historical accounts that can shed light upon what was observed during the tour), chapter eleven provides a more thorough analysis of some of the situations observed in the previous chapters (in retracing the associations to form a chain of evidence).

Chronicle of a death foretold

Introducing the CpSQ project

On April 25th of 2006, when the Quebec Government announced that the Health Smart Card had died, nobody was really surprised. It had been born as a pilot scheme more than fifteen years before, yet it had never really been deployed fully, it had never breathed on its own as a full scale project. A couple of years before in 2002, it had entered its teenage years on a respirator. At this point, some people were fighting hard for its survival whereas others were thinking that life-prolonging procedures were unduly used to maintain it alive. Thus on this Tuesday of April, nobody was surprised yet no one really knew what had really happened. Was this death natural or caused by the removal of life-support devices? Why then and not three, five or ten years before?

The introduction of the idea of a health smart card in Quebec was traced back to a newspaper notice published in March of 1989. Entitled "Une nouvelle carte qui dit tout,"[23] this 192-word paragraph was very briefly presenting the smart card technology and mentioning the fact that it had been used as a health smart card during a two year-pilot project conducted in Blois, France (Saint-Laurent 1989, March 20). In a slightly longer article (366 words), the concept was mentioned again two months later, in a critique voiced by the Fédération des médecins omnipraticiens du Québec

[23] "A new card that says it all"

(FMOQ – Quebec General Practitioners Federation) regarding a governmental document that had just been submitted, entitled *Orientations du ministère de la Santé et des Services Sociaux pour améliorer la santé et le bien-être au Québec*[24] (Bernier 1989, May 10).

It is six months later that the idea of a health related smart card pilot project first appears, still within the same major newspaper. This 718-word article basically reiterates the technical explications of the first article, mentions the governmental document featured in the second article and presents the idea of a pilot project to take place in the Quebec City area. The reader then learns that the project would be conducted by a team from the Département de Santé Communautaire du Centre Hospitalier de l'Université Laval (DSC-CHUL – Community Health Department at Laval University Health Center) under the responsibility of Dr. Jean-Paul Fortin, who is quoted saying that "the objective of the project is to improve the quality of the health care with a better circulation of the data from one caregiver to the other."[25] The card would be used for the immunization follow-up of 2000 children as well as for the medical follow-up of about a thousand patients suffering from congestive heart failure. Finally, the article introduces new technical concepts such as the access card, which would be necessary for any professional wishing to consult the content of a patient's card, as well as zones within the card holding distinct information such that different zones would be accessible to different professionals depending upon their qualifications (Venne 1989, November 4).

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[24] "Orientations of the ministry of Health and Social Services in order to improve health and well-being in Quebec"

[25] "L'objectif du projet est d'améliorer la qualité des soins par une meilleure circulation de l'information d'un intervenant à l'autre"

The health smart card then resurfaces in the media in February of 1990. According to this article, several groups had been promoting the use of a smart card to control abuses within the health care system, during a public hearing related to the pre-bill on health services and social services. In order to get the records straight, the article presents quotes from Dr. Fortin – who says that a health smart card should never serve to control the amount of care received by a patient[26] – and from the Health and Social Services Minister's press attaché – who says that the raison d'être of the health smart card is to offer better care and avoid exams duplications when one sees another doctor[27]. The article then raises the confidentiality issue, quoting the Commission d'accès à l'information (CAI – Access to Information Commission) – who says the smart card brings about technical questions as well as worrying questions – and again Dr. Fortin – who says not to be bothered by this issue considering that solutions do exist to alleviate it. Finally, the article briefly restates the outline of Dr. Fortin's planned pilot scheme (Canadian Press 1990, February 19).

Nine months later, in November of 1990, another newspaper article announces that a health smart card will be tested in the Rimouski area in 1991 for a period of 18 months. This card will not be replacing the medical record but rather supplement it. The reader then learns that the department of informatics and the department of social and preventive medicine both at Laval University, the DSC-CHUL and the Régie de l'assurance maladie du Québec (RAMQ – Quebec's Health Insurance Board) are involved in this project (Canadian Press 1990, September 20).

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[26] "...[C]ette carte-santé ne doit en aucun cas servir à contrôler la quantité de soins reçus. "

[27] "La première raison d'être de la carte-santé serait d'offrir des meilleurs soins et d'éviter la répétition d'examens lorsqu'on change de médecin. "

On October 3rd, 1991, the Ministry of Health and Social Services announces that it will go on with its experimentation of a health smart card. The related newspaper notice adds that the pilot scheme planned to start in a few weeks will affect elderly people, pregnant women and infants in the city of Rimouski, as well as the whole population of St-Fabien, a nearby village, and that it will last 18 months (Canadian Press 1991, October 4). It is more than a year later, in December of 1992, that the project is officially launched in the Rimouski area (Wells 1992, December 11).

Five rules of action are guiding the project at that point. First, a smart card user has to provide informed consent. Second, participation is on a voluntary basis and discrimination could not be tolerated on non-participants. Third, confidentiality and security of the clinical data has to be guaranteed. Fourth, a user could always consult the information stored on the card. Fifth, a user could always refuse certain information to be inscribed on the card or he or she could ask to modify it (Fortin, *et al.* 1995).

Smart cards are issued to 7248 patients overall whereas 299 professionals (general practitioners, medical and surgical specialists, pharmacists, nurses and emergency medical technicians) have agreed to accept and use it (Aubert and Hamel 2001). The patient card holds information about the patient – identification, emergency data, immunization, medication and medical follow-up – as well as other decision support tools – a pharmacotherapeutics advisor, a prevention module and the immunization protocol. The professional ability card identifies the profile each individual is granted access to (e.g., physician, pharmacist, nurse or emergency medical technician). After

two years, it appears that 73% of the cards were used at least once, and that most professionals used at least one card in the two years the project lasted. On the patients' side, a bigger proportion of elderly and infants used their card at least once but the middle-age users presented their card more systematically (50% of the time compared to 33% of the time for the other groups). On the professionals' side, most of the groups used the card either frequently, moderately of occasionally, with the exception of the emergency medical technicians who barely used the card, due to technical and organisational problems. Finally, the pharmacotherapeutics advisor was the decision tool mostly used, yet it was most often accessed without the usage of any patient smart card. The prevention module was seldom consulted but when it was, professionals mostly did not use a patient card to access it either (Fortin, *et al.* 1995).

Three years later, during Spring of 1998, the government of Quebec announces the beginning of a new smart card pilot project this time in Laval, a large city north of Montreal. This new project starts in fact in September of 1999 and the smart card is to be used at one general hospital, one rehabilitation hospital, four local community health centres, and one ambulatory centre that are already linked together by an interorganizational information system (SI-PRSA[28]). The main difference between this project and the previous one is that some information is not stored directly on the card and rather is in a centralised database, which can only be accessed using the smart card as a key. The card still holds information such as identification, known allergies and emergency data but the immunization record, medical antecedents and follow-up, as well as laboratory results are now stored in an anonymous database

[28] Système d'Information de la Programmation Régionale des Services Ambulatoires, a computerized information system designed to coordinate care across many sites, simplifying the process for patients while keeping their family doctors informed of their progress.

maintained by RAMQ. This information is aggregated under the name health card record (DCS) and it circulates via an Intranet-like private and secure network (RTSS), an existing infrastructure developed for the MSSS (Sicotte 2001).

As in the Rimouski project, access to the patient information, whether on the card or in the centralised database, is granted to the professional when a proper access card and a personal identification number (PIN) is provided, along with the patient card and the patient's PIN. Beyond being an identification tool for the patient, this card also becomes the manager of his or her consent about the type and nature of the clinical information that can be inscribed into the health card record and about the type (or name) of professionals that can consult the record subsequently (Sicotte 2002a).

Contrary to what happened in Rimouski, the participation rate for the Laval project is very low. Whereas a total of 1825 patient cards are issued, only 315 are in fact activated and 146 are used along with a professional in order to fill out health card records. As for the access cards, 842 professionals receive one yet a large majority of them do not use it to complete a patient's health card record. Instead, they use it as a tool to identify themselves to a different and autonomous information system, the SI-PRSA mentioned above. Only 15 professionals use their card for the intended purpose of the pilot project (Sicotte 2002a).

The Laval project is supposed to last from January 1999 to May 2002. In reality, it starts October 13, 1999 and is abruptly ended in September of 2001, six months after the

Health and Social Services Minister had announced, in a brief presented to the Cabinet, his intention to deploy a health smart card throughout the province (R. Trudel 2001d)[29].

This brief now presents ten rules of action that have to be respected in implementing the health smart card. Informed consent, voluntariness, security and confidentiality of clinical data and consultation rights were already guiding the pilot projects. To these principles are added the principles of transparency (project purpose); information clarity; limitations of usage and information communication to others; right of appeal; responsibility and liability; and security guaranties concerning the availability, integrity, and confidentiality of the clinical data, as well as the authentication of the users (patients and professionals) (R. Trudel 2001d).

Finally, the draft bill on Quebec Health Smart Cart is presented in December of 2001, along with a second brief to the executive Cabinet. This is following that submission that a public consultation is planned to be held early in 2002 (R. Trudel 2001b; 2001c).

A total of forty-nine briefs are submitted to the government and forty-two are presented in front of the commission between February 19 and April 9, 2002. We know that one brief was received after the last day of the audience hence preventing it from being presented but six other briefs were sent and not presented. The president of the commission, when officially submitting these briefs to the parliamentarians, simply stated: "Before proceeding to the final statements, I will then submit the briefs

[29] Rémy Trudel, who was Quebec's minister of Health and Social Services in 2001, is not related to me.

that we received, since these people did not come to exchange with us in order to make their brief public. There is the brief from...[30]"

[30] "Avant de procéder aux remarques finales, je vais donc déposer les mémoires que nous avons reçus, puisque les gens ne sont pas venus échanger avec nous pour rendre publics ces mémoires-là. Il y a donc le mémoire de..."

About Analyzing the Corpus at First [rē-'flek-'si-və-tē] 3

WHEN I first started this research project, I must admit I had a strong bias towards information technology. In fact, as mentioned earlier, I was really wondering why such an interesting and important project was aborted. Through discussions with my colleagues, I realized quickly that this feeling seemed to be generalized among us. My first pass through the written material gave place to many annotations where I would systematically mark the arguments put forward against the project as awkward. I was also very understanding of the Government spokesperson at the Commission at that time.

In parallel, I was engaging deeper in both Bourdieu and Latour as I knew deep down the answer was in staying neutral and not taking anything for granted, and that these theorists could give me tools to achieve just that. This is where my colleagues were puzzled as they seemed to have a hard time understanding where I was heading using barely unknown sociological theories to study an MIS implementation matter. As a result, at the beginning of that journey (after proposal), I was fighting my personal (social) bias towards technology on one side, and the field bias of my academic community of the other side. But I persevered.

Concerns from the Political Field

First stop – Pursuing a smart card fantasy

POLITICAL capital is the control over the distribution of public goods and services. For instance one may think about the private appropriation of residences, cars, hospitals and schools (such as in the Soviet regime) or the mere usage of such commodities, as is more common in Quebec (official residence, limousines, etc.) as indicators of political capital. Ultimately, one may see it as the ability to formulate the law (Bourdieu 1998). Social capital is also very important within the political field, as it is often the beneficial effect of an action. This social capital can even be converted into symbolic capital, when the decision makes history. The following section will recount the story exposed earlier, this time putting more emphasis on political moves or arguments, as well as on the individuals who made them.

The Panorama

It is in the community health department of a Quebec City hospital (DSC-CHUL) that the idea of a Quebec health smart card first came to life in 1987.[31] At the time, the

[31] I am referring here to the article written by Benoit Godin about the Quebec microprocessor patient card and published in 1997. Professor Godin had regular conversations with the main actors involved in the project and had access to several documents (such as meeting minutes) concerning the project. As his work is considered confidential (no verbatim quotations could be used) – the documents in question are still classified to this day –, his paper (taken as a black box) allows me to broaden the story scope and thus to trace more associations within the network under study.

Ministère de la santé et des services sociaux (MSSS – Quebec Health and Social Services Ministry) was trying to find an alternative to the costly immunization booklet that is provided to every Quebec citizen at birth. In discussing the problem with local medical authorities, the MSSS representatives were introduced to the health smart card concept by a French physician recently arrived from Lille, where a micro-processor health care card was being used by way of experiment. It quickly became apparent to the team at DSC–CHUL that such a device could hold immunization data, and a proposition was thus made to the MSSS to conduct a feasibility study (Godin 1997).

Around the same time, in 1988, the commission of inquiry on health services and social services published its report which supported the idea of a health smart card, an idea that was later considered favourably by the MSSS. Finally, during the same period, the Régie de l'assurance maladie du Québec (RAMQ – Quebec health insurance board) wanted to rework and soften its image as the sole controller/regulator of the health care system. In order to do so, it organized a visit to Europe to assess existing smart card projects. It is following that trip that Laval University's Department of Social and Preventive Medicine was instructed to develop and implement a pilot health smart card project (Godin 1997).

As we can see, while the project was initiated within the academic (or intellectual) field, it was rapidly appropriated by the political field. A new and inspiring technological solution had been introduced by a French physician at a university hospital and immediately, efforts were made to find a niche for it, to find a problem

that it could resolve. The immunization record was convenient, essential to the public health programme yet expensive under its current form. The computerization of this tool offered a two-for-one opportunity in this field. First, it would improve a public service (lowering its cost for the same return), hence procuring political capital. Second, it could eventually make history if the province were one of the first to use such an avant-garde technology, hence procuring symbolic capital. The favourable opinion formulated by the commission of inquiry on health services and social services published report served to legitimize the smart card technology in the eyes of the government (mainly the MSSS). To better understand the political situation, one must note that before becoming chairman of the above-mentioned commission from 1985 to 1987, Jean Rochon had been director of the Department of Social and Preventive Medicine at Laval University from 1970 to 1979, director of the DSC-CHUL from 1973 to 1979, and dean of the Faculty of Medicine at Laval University from 1979 to 1985. Thus, it was not by chance that this first series of events unfolded as it did.

The political argument became even stronger when protagonists started to make references to economic development. This began at the end of January 1997, when Motus Technologies was created in order to maintain the unique expertise acquired by – and preserve the commercial value of the tools built by – the RAMQ during the Rimouski pilot scheme. This was done because, in the first place, developing new technologies and prospecting clients was not part of the RAMQ mandate, and because a considerable amount of money was now necessary to commercialize the product. The RAMQ therefore transferred all the technology that had been developed for the

Rimouski pilot scheme to this newly formed private corporation, which specialised in developing leading-edge technology. Forty-five percent of this society was owned by Société financière d'innovation inc. (SOFINOV), 24% by Société Innovatech Québec et Chaudière-Appalaches, and 31% by the RAMQ. In turn, 100% of SOFINOV was owned by the Caisse de dépôt et placement du Québec (CDPQ – Quebec Deposit and Investment Fund), an institutional fund manager responsible for administering public pension plans in Quebec.[32] (Beaulieu and Doré 1997)

In September 1997, a special report on the creation of Motus Technologies was published in *Le Réseau Informatique*. It made mention of the international expertise acquired by Quebec during the Rimouski experiment, and of the fact that the RAMQ was one of the few Canadian organizations to exhibit a project at the G7 Ministerial Conference on the Information Society held in Brussels in 1995. The article goes on to state that the creation of the new entity (Motus Technologies) should allow the Province of Quebec to serve as a technology showcase in terms of health smart card applications and, through its partnership with Motus, to benefit from a return on capital notably from stocks on foreign markets (Beaulieu and Doré 1997). A similar allusion was found in a newspaper article in June of 1998 that stated that "the deployment of informatics and telecommunications in the healthcare system is supposed to improve care. Yet this exercise also serves another end, the economic development of the Province of Quebec."[33] (Venne 1998, June 3)

[32] http://www.lacaisse.com/en/Pages/Accueil.aspx

[33] "Le déploiement de l'informatique et des télécommunications dans le système de santé est censé avoir pour but d'améliorer les soins. Mais cet exercice sert aussi une autre fin, celle du développement économique du Québec."

The government's economic aspirations became even clearer as it was stated textually in the brief presented to the Cabinet by the then Minister of Health and Social Services in April 2001 (one of the few documents, along with the pre-bill, made available to people who later wanted to participate in the public hearing). In it, one could read that "the [Health Smart Card] project also opens promising vistas in terms of economic development,"[34] followed by a paragraph that stated that the market for smart cards would be very dynamic in upcoming next years and that, with the technology developed for the Health Smart Card project, the Province of Quebec could be expected to play an enviable systemic and technological leadership role. Later, the brief also mentioned that "Motus Technologies [...] would be a privileged supplier in the area of smart card usage and security, in conformity with its mission."[35] (R. Trudel 2001d)

In the above paragraphs, I have mainly exposed political aspects that were apparent prior to the public hearing, but allusions to the politics of the project were also made in briefs, and presented at the hearing by several individuals and groups. I will now present these opinions. Since verbatim quotations are available, from now on, they will constitute the main part of the story so as to provide the reader with a better feel of the situation.

The public hearing was in and of itself an important political event. A public hearing is the "vocal part" of general consultations set up by the government in order to allow individuals and groups to express their opinions regarding a question, a determinate

[34] "Le projet ouvre également des perspectives prometteuses sur le plan du développement économique."
[35] "Motus Technologie [...] interviendrait comme fournisseur privilégié pour les volets de l'utilisation des cartes à microprocesseur et de la sécurisation et ce, conformément à l'objet même de sa mission."

problem or, in this case, a bill or a pre-bill. These interventions are always based on briefs previously submitted to the governmental commission in charge of the consultation, here, the Social Affairs Commission.[36] The public is made aware of the general consultation by way of an official notice published in the *Gazette officielle du Québec* and in daily newspapers (Assemblée nationale du Québec 2003). Anyone can prepare and submit a brief for a general consultation although very often, just as for a private consultations, the commission solicits briefs from certain groups or organizations considered particularly knowledgeable in the domain under investigation. In the end, the government chooses which briefs will be heard publicly.

All in all, in order to participate in a public consultation of this type, one has to be knowledgeable about parliamentary procedures. For instance, one has to know where to find the invitations and the different documents at the basis of the consultation. It also helps to know what a standard brief looks like and be able to write one. One must also be willing to eventually present it orally to members of parliament.

A lack of this prior knowledge can give rise to interesting exchanges during a public hearing, as was the case at the CpSQ hearing between the members of the Conférence religieuse canadienne (CRCQ – Canadian Religious Conference) and the members of the commission:

> Mrs. Théberge (Lorraine): [...] So, maybe my colleagues could give some examples of this.
> Mrs. Michaud (Huguette): If we go back to...
> The Speaker (Mrs. Carrier-Perreault): Excuse me.
> Mrs. Michaud (Huguette): Oh! We have to ask for permission to speak?

[36] Commission des affaires sociales.

> The Speaker (Mrs. Carrier-Perreault): So, you are... Excuse me...
> Mrs. Michaud (Huguette): Michaud.
> The Speaker (Mrs. Carrier-Perreault): You are Sister Michaud.
> Mrs. Michaud (Huguette): Michaud.
> The Speaker (Mrs. Carrier-Perreault): So, you will understand that this is, in fact, done for the benefit of the people who transcribe our words.
> Mrs. Michaud (Huguette): We need to give our name before speaking?
> The Speaker (Mrs. Carrier-Perreault): Yes, that would be... Sister Michaud.[37]
> (Quebec Hansard, March 21 2002)

Later on, each time Sister Michaud spoke, she would systematically name herself first. This gave the exchange an amusing tone.

Although the public consultation was organized in conformity with the rules, several participating individuals or groups questioned its democratic aspect. For instance, Mr. Pierrot Péladeau wrote:

> It is clear that, in contrast, the present consultation on the Quebec Health Smart Card Pre-bill, without any other documentation whatsoever, is almost an insult to the National Assembly, to the parliamentarians and citizens, as well as to Quebec's democracy.[38] (Péladeau 2002, p. 10)

In the same vein, Marie-Claude Prémont wrote:

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[37] Mme Théberge (Lorraine): (...) Alors, peut-être que mes collègues pourraient donner des exemples de cela.
Mme Michaud (Huguette): Si on retourne dans...
La Présidente (Mme Carrier-Perreault): Je m'excuse.
Mme Michaud (Huguette): Ah! Il faut demander la parole?
La Présidente (Mme Carrier-Perreault): Alors, vous êtes... Excusez...
Mme Michaud (Huguette): Michaud.
La Présidente (Mme Carrier-Perreault): Vous êtes soeur Michaud.
Mme Michaud (Huguette): Michaud.
La Présidente (Mme Carrier-Perreault): Alors, vous comprendrez que c'est pour le bénéfice des personnes qui copient nos propos, en fait.
Mme Michaud (Huguette): On doit se nommer avant de parler?
La Présidente (Mme Carrier-Perreault): Oui, ce serait... Soeur Michaud.

[38] "Il est clair que, par contraste, la présente consultation sur l'avant projet de loi sur la carte santé du Québec sans autre documentation que ce soit représente presque une insulte à l'Assemblée nationale, aux parlementaires et citoyens ainsi qu'à la démocratie québécoise."

> The essence of the legislative procedure cannot be to deceive the population. The objective of the pre-bill cannot be to manipulate the National Assembly of Quebec. Yet, the submitted document must receive the most severe reprimands since it clashes with the essence of the parliamentary institutions and Quebec's democracy.[39] (Prémont 2002, p. 16)

Mr. Péladeau is a researcher at the Centre for Bioethics of the Clinical Research Institute of Montreal, as well as the scientific coordinator and editor-in-chief of *Observ@tions*, the Telehealth Ethics Observatory Bulletin of the Centre for Bioethics. He has been devoted to this project for a very long time, has written several opinion pieces for newspapers and has been an invited guest of different television programmes as an expert on the subject. As per their website, the purpose of the Centre is "to contribute to the clarification, prevention, and where possible, the management of ethical, legal, and social problems linked to the use of information and communication technologies and networks within the health care system." (http://www.ircm.qc.ca/bioethique/english/telehealth/programme.html, last consulted August 1, 2008)

Mrs. Prémont, on the other hand, is an engineer, a lawyer, and a professor of law at the École nationale d'administration publique (ENAP – Public Administration University). She was at one point Associate Dean of Graduate Studies for the McGill Faculty of Law. Her work mainly focuses on the health care sector and Professor Prémont has participated in many smart card trials both in Europe and in Quebec during the last decade.

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[39] "L'essence du processus législatif ne saurait être de tromper la population. L'objectif de l'avant-projet de loi ne saurait être de manipuler l'Assemblée nationale du Québec. Or, le document déposé doit recevoir les réprimandes les plus sévères, puisqu'il heurte l'essence des institutions parlementaires et démocratiques québécoises."

Whereas both of these participants are academic experts, hence with a greater amount of cultural capital, the same concern was voiced in the brief presented by the Confédération des organismes de personnes handicapées du Québec (COPHAN – Confederation of Quebec Organizations for Disabled Persons) in which it was written: "In short, the conditions for a real debate between the actors involved have not been met, which makes the exercise in itself not credible."[40] (COPHAN 2002, p. 12)

Pushing this a bit further, some individuals and groups even considered the debate to be worthless, i.e., the dice to be loaded, for instance the spokesperson for the CRCQ mentioned:

> So, to begin with, first, I would like to say that it is quite difficult for citizens who want to give an opinion in a parliamentary commission to hear the minister of Health declare that "the project, in any case, we will proceed with it no matter what," even though we are in a parliamentary commission. And I must also say that the document of the Quebec Government, who is currently pushing[41] the project, is already talking about future implementation steps. So, I am wondering, we are wondering, within this context, if we understand that the healthcare system is in a state of crisis, but it might also be democratic crisis that we are experiencing presently.[42] (Quebec Hansard, March 21 2002)

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[40] "Bref, les conditions d'exercice d'un véritable débat entre les acteurs concernés ne sont pas réunies ce qui rend l'exercice en soi non crédible."

[41] The literal translation from French here would be *doing propaganda*, which conveys a stronger meaning.

[42] "Alors, dans un premier temps, en préalable, je voudrais vous exprimer que c'est assez difficile pour des citoyens qui veulent se prononcer en commission parlementaire d'entendre, de la part du ministre de la Santé, dire que 'le projet, de toute façon, on va y aller coûte que coûte', alors qu'on est en commission parlementaire. Et je dois dire aussi que le document du gouvernement du Québec, actuellement, qui en fait la propagande, de ce projet-là, parle déjà des étapes futures de mise en œuvre. Alors, je me demande, on se demande, dans ce contexte-là, si on comprend que le système de santé est en crise, mais c'est peut-être aussi une crise de démocratie dans laquelle on est actuellement."

Or even Chantal Mino, an educational therapist who specified that she was standing "as an ordinary Quebec citizen"[43] (Quebec Hansard, March 28 2002) who wrote:

> [I] would like to quote Mrs. Denise Carrier-Perreault, Deputy Leader of the government[44], who told the Quebec National Assembly on October 16, 2001, around 10:00 AM: '...So when there is an agreement, as you are saying, Mr. Speaker, when there is a good agreement, then, we can ignore many of the rules of our regulations'. Therefore let's eliminate the Quebec Court, the Commission for Access to Information[45], the Charter of Rights and Freedoms, legislation, regulations and the word democracy from our Quebec society because they don't mean anything anymore.[46] (Mino 2002, pp. 5-6)

This even went as far as questioning the democratic aspect of the smart card project itself. On this subject, Marie-Claude Prémont wrote: "On the contrary, the ministerial briefs and the pre-bill as it is written support the thesis of a plan contrary to the law, consequently running counter to the very foundations of parliamentary democracy."[47] (Prémont 2002, p. 3)

Mrs. Prémont argued that the pre-bill was setting the table for public-private partnerships in allowing, for instance, cards to be issued to non-insured individuals and, most of all, the modulation of and disparities between individuals' health coverage, which stood against Quebec's Health Insurance Act.[48] As such, she regarded

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[43] "[E]n tant que citoyenne bien ordinaire du Québec, je tiens à le préciser..."
[44] And incidentally, chairman of the Commission.
[45] Commission d'accès à l'information - CAI.
[46] "...je voudrais citer Mme Denise Carrier-Perreault, leader adjointe du gouvernement, qui a dit à l'Assemblée nationale du Québec, le 16 octobre 2001 vers 10h00 : '... Alors, quand il y a entente, comme vous le dites vous-même, M. le Président, une bonne entente, là, dans ce temps-là on peut passer par-dessus beaucoup de règles de nos règlements.' Donc, éliminons la Cour du Québec, la CAI, la Charte des droits et libertés, les lois, les règlements et le mot démocratie de notre société québécoise car ils n'ont vraiment plus aucun sens."
[47] "Au contraire, les Mémoires ministériels et la facture de l'avant-projet de loi appuient la thèse d'un plan contraire à la loi, heurtant en conséquence les fondements mêmes de la démocratie parlementaire."
[48] R.S.Q. Chapter A-29, Health Insurance Act.

the smart card pre-bill as an affront to parliamentary sovereignty, as well as to the Rule of Law.

Some groups and individuals considered the debate to be based on false premises. The most blatant expression of this is found in the title of the Quebec Nurses Federation brief, *Un détournement majeur*, which can be literally translated as "A major hijacking," where, they wrote:

> We can read in the documentation from Motus Technologie, the company chosen by the RAMQ to develop the smart card project, that 'the smart card is destined for multiple applications. The same card will soon be able to manage files, printer and photocopier access. It could even be used as an electronic purse for cafeteria vending machines!'
>
> With such affirmations, we are entitled to wonder about the real intentions behind the pre-bill submitted to the public consultation. Are they only aiming to meet the objectives for which the pre-bill was presented?[49] (FIIQ 2002, p. 17)

This was not the only mention made to Motus Technologies in the briefs or the Hansard. In fact, several individuals or groups considered that there was a conflict of interests between Motus Technologies and the RAMQ, which compromised the project. For instance, in their brief, the COPHAN wrote:

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[49] "On peut lire dans la documentation de Motus Technologies, fournisseur retenu par la RAMQ pour le développement du projet de la carte à microprocesseur, que 'la carte à microprocesseur est vouée à de multiples applications. La même carte pourra bientôt gérer l'accès aux dossiers, aux imprimantes et aux photocopieurs, par exemple. Elle pourrait même servir de porte-monnaie électronique pour les machines distributrices et la cafétéria!'
Avec de telles affirmations nous sommes en droit de nous demander que vise réellement l'avant-projet de loi soumis à la consultation publique? Vise-t-il uniquement les objectifs pour lesquels il a été présenté?"

> Something else to consider also: the financial interests of the RAMQ in Motus Technologies, privileged supplier (without competitive bids) of the data security concept for the RAMQ project. This situation, surprising to say the least, if not unacceptable, does not ease our concerns and rather adds further to the numerous reservations we formulated about the previous propositions which are still topical.[50] (COPHAN 2002, p. 3)

Similarly, the Regroupement intersectoriel des organismes communautaires de Montréal (RIOCM – Community Organizations Cross-Sectoral Association of Montreal) wrote in their brief entitled *Le miroir aux alouettes*, an expression that refers to the lure used to attract and hunt skylarks:

> Perhaps it would be more accurate to talk about the RAMQ's triple role? Is it true that the RAMQ holds shares in Motus Technologies? Is it accurate that it is on the board of directors of the company that developed the one and only project laid on the table and that this company would basically be the unique supplier to the Health and Social Services Ministry[51] and other private and public organizations, were the smart card project to be implemented? Why do we have the feeling that the financial interests of some had precedence on the needs and collective interests of Quebec's population?[52] (RIOCM 2002, p. 6)

In this section, political manifestations of the CpSQ project were exposed, offering a different feel to the story. Using Bourdieu's concepts, I will now analyze the field.

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[50] "Autre élément à considérer également: les intérêts financiers de la RAMQ dans l'entreprise Motus Technologies, fournisseur privilégié (sans appel d'offres) du concept de sécurisation des données prévu pour le projet de la RAMQ. Cette situation pour le moins surprenante, sinon inacceptable, est bien loin de calmer nos inquiétudes et vient s'ajouter aux nombreuses réserves formulées à l'égard des propositions précédentes et qui demeurent d'actualité."

[51] Ministère de la Santé et des Services Sociaux – MSSS.

[52] "Mais peut-être serait-il plus exact de parler du triple rôle de la RAMQ? Est-il vrai que la RAMQ a des actions de Motus Technologies? Est-il exact qu'elle siège sur le conseil d'administration de cette compagnie qui a développé l'unique projet déposé sur la table et que cette compagnie serait à toutes fins utiles l'unique fournisseur du MSSS et des établissements privés et publics, si le projet de carte à puce était mis en œuvre? Pourquoi a-t-on le sentiment que les intérêts financiers des uns et des autres ont eu préséance sur les besoins et les intérêts collectifs de la population québécoise?"

Analyzing the Field

Capital Distribution

As mentioned in this chapter's opening, the types of capital at stake within the political field are political, social and symbolic. Figure 7 presents an overview of the political field.

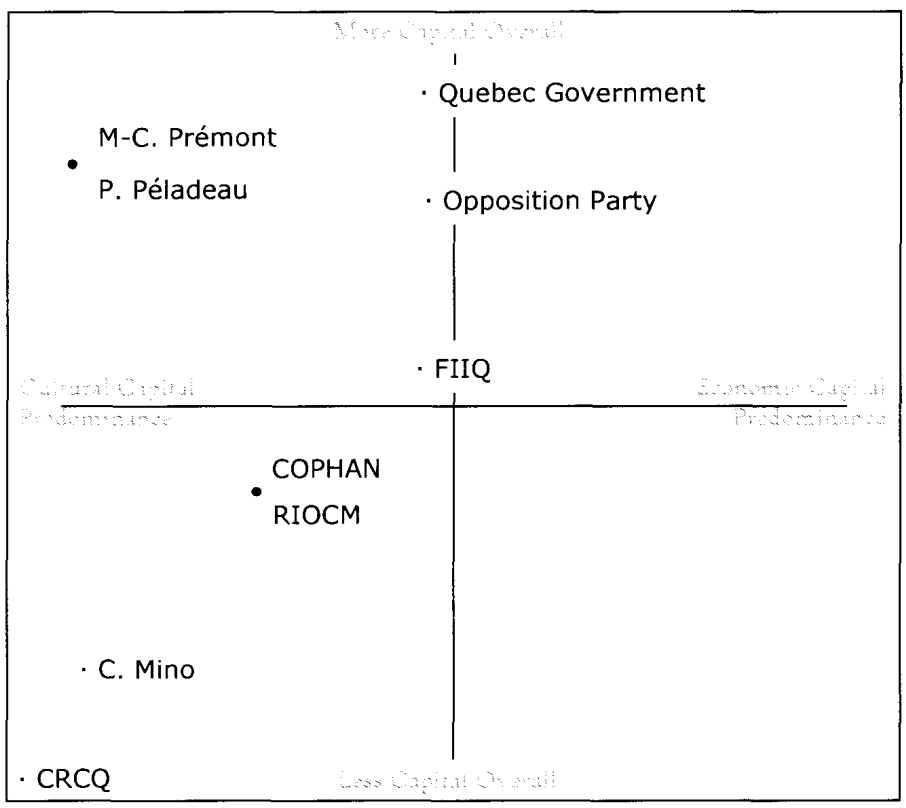

Figure 7 – The Political Field

Of course, these are approximate locations, as no quantitative data were collected about these individuals or groups. What's more, the exercise is performed relationally,

meaning that the position of a group or individual is chosen in relation to the matter in hand (the Quebec Health Card project), as well as in relation to all other groups participating within the field. Therefore the positions must not be considered as absolutes.

The vertical axis discriminates the amount of overall capital. As such, the CRCQ, whose ageing members took vows of poverty, are considered to have less overall capital than Chantal Mino, who is there as a private citizen. In turn, the COPHAN and the RIOCM are considered to have less overall capital than the FIIQ, allowing for the latter group's greater leverage in the health sector (the right to strike, amongst other things). Finally, the participants from the government and the experts have more overall capital, the elected party and Professor Prémont being "wealthier" than the opposition party and P. Péladeau in terms of overall capital.

The horizontal axis discriminates the type of capital prevailing and it should be read as follows. Overall, CRCQ's capital is predominantly cultural. The same can be said about Chantal Mino, COPHAN and RIOCM, but the more their position is centred on this axis, the more the balance between cultural (including intellectual, political, social and symbolic capital) and economic capital is achieved. Finally, while the two experts and the government officials have more overall capital than the others, the experts mostly have cultural (intellectual, social and symbolic) capital whereas the participants from the government have a somewhat mixed balance of cultural (political and social) and economic capital. They are not completely to the right, as their motivation is not solely economic profit.

Things get more interesting when we look at the schema displaying the key agents within the political field and their relationships with one another.

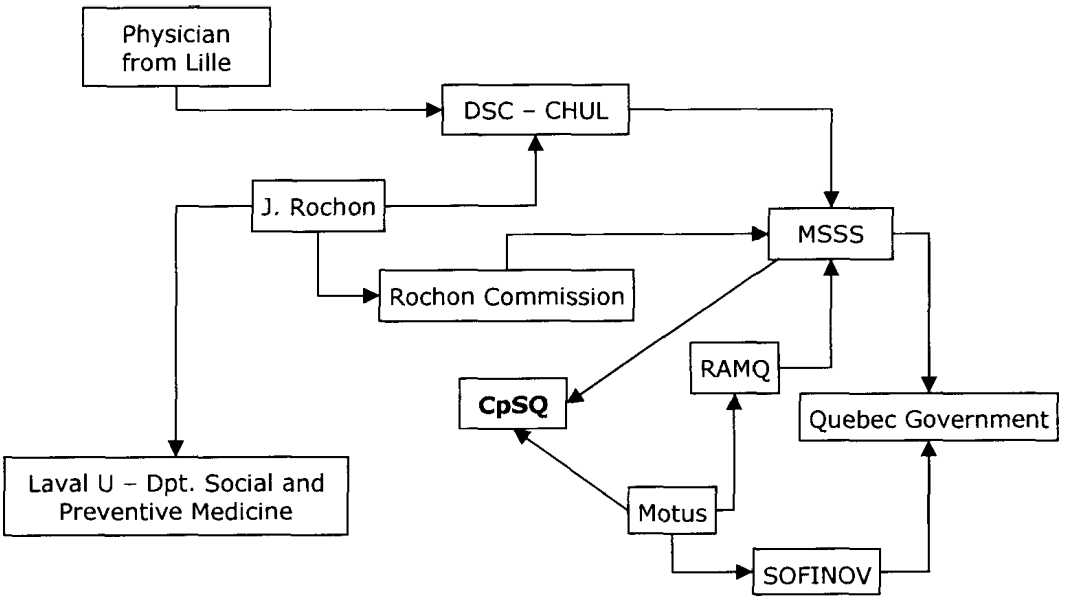

Figure 8 – Key Agents and Their Relationships

As is seen in the figure above and as was explained earlier, before being brought to the public's attention, the smart card idea emerged from, and grew within, a small number of individuals and organizations that were closely tied. The Quebec Government fantasized about using the smart card technology in order to cure the health care sector of all its ills. It seemed clear to government officials that whoever brought this idea to completion would receive a great deal of symbolic power. The term used in the previous sentence is important, as an "idea," and not a "project" was being pursued. In fact, over the years, every successive health minister seems to have persisted in trying to fit the idea into a new project, i.e., to apply the smart card solution to a new problem. Alternatively, Mr. Péladeau and Mrs. Prémont had enough capital to influence the outcome of the pre-bill and in succeeding in this endeavour

would secure the capital they already possessed, mostly cultural (intellectual) capital. Finally, without having a lot to gain in the debate, the other participants in this field felt they had a lot to lose if they did not participate. They therefore tried to discredit the project on political grounds in order to achieve their ends.

Despite the fact that many participants did not have a lot of capital, all, with the exception of the CRCQ, knew the rules of the game, i.e., they understood the functioning of a public consultation. In fact, most of these organizations had participated regularly in such exercises, upon invitation from the government or not. In the present situation, they were trying to influence the issue of the pre-bill in their own capacity, using political moves and arguments.

Symbolic Violence

Within this field, symbolic violence was expressed through the concealment of important information. To this effect, Pierrot Péladeau wrote:

> Now, this is the most evident and serious rub – the RAMQ did not produce any explanatory documents or discussion papers along with the pre-bill for this public consultation. It restricted, to the utmost, access to information about its project. And many public and private organizations even had difficulty getting, copies of the public portion of the two briefs presented to the Cabinet concerning the project from the MSSS.[53] (Péladeau 2002, p. 14)

[53] "Or, c'est ici que le bât blesse de la manière la plus évidente et le plus gravement. La RAMQ n'a produit aucun document explicatif ou de discussion pour accompagner l'avant-projet de loi dans le cadre de la consultation publique. Elle a restreint au maximum l'accès à l'information sur son projet. Et

Pierrot Péladeau himself tried to obtain some documents, as is seen in this newspaper excerpt:

> The RAMQ refused, on January 30th, to hand over the document entitled *Administrative Conception and Technology*, Version 4.1 of December 2001, to Pierrot Péladeau, a research worker from the Centre for Bioethics, of the Clinical Research Institute of Montreal,[54] who was claiming it in accordance with the Access to Information Act.[55] (Dutrisac 2002, February 6)

One can suppose that opinions about the project were a lot easier to control when the information circulating about it could be controlled at the source. Of course, it would have been irresponsible for elected officials to mention this. The reasons put forward by the RAMQ's spokesperson to account for the unavailability of these documents were thus:

> If the Quebec Insurance Board (RAMQ) refuses to share with the public some documents deemed crucial to the health smart card project, it is because the parliamentary commission is about the principle of whether or not to provide every Quebec citizen with a health smart card, not about the details of its implementation. The real discussion about this card, about the electronic medical record that comes along with it, and about the creation of a centralized database will come afterwards, once the government will have made its final decision.[56] (Dutrisac 2002, February 6)

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plusieurs organismes publics et organisations privées ont même eu de la difficulté à obtenir du ministère de la Santé et des Services sociaux des exemplaires des portions publiques des deux mémoires au Conseil des ministres sur le projet."

[54] Centre de bioéthique de l'Institut de recherches cliniques de Montréal (IRCM).

[55] "(L)a RAMQ a refusé, le 30 janvier dernier, de remettre le document, intitulé Conception administrative et technologie, version 4.1 du 17 décembre 2001, que réclamait, en vertu de la Loi d'accès à l'information, le chercheur Pierrot Péladeau, du Centre de bioéthique de l'Institut de recherches cliniques de Montréal (IRCM)."

[56] "Si la Régie de l'assurance-maladie du Québec (RAMQ) refuse de rendre publics des documents jugés cruciaux sur son projet de carte santé à puce, c'est que la commission parlementaire qui lui sera consacrée ne porte que sur le principe de doter ou non les Québécois d'une carte santé à microprocesseur et non pas sur les détails de son implantation. La vraie discussion sur cette carte, sur le dossier médical

Interestingly, the first article of the pre-bill indicated that it aimed at instituting a patient health card, a professional access card, and a health summary for insured individuals. In turn, the 51st article of the same document clearly specified that the RAMQ was responsible for the collection, conservation and management of the information related to health summaries. Implicit in the previous article was the idea that information was centralized in a database managed by the RAMQ. The public consultation being about the pre-bill and the pre-bill being about the elements just mentioned, this can hardly be reconciled with the RAMQ spokesperson's reasoning cited earlier. Reducing the public commission to the sole principle of providing or not a smart card was thus a violent way of dismissing the concerns of most individuals or groups.

Concepts	Example
Field	Political
Common stake	To influence the issue of the pre-bill, whatever that is
Capital most valued	Political capital; social capital; symbolic capital
Participants	Quebec Government; Opposition Party; Mrs. Prémont; Mr. Péladeau; FIIQ; COPHAN; RIOCM; Mrs. Mino; CRCQ
Illusio	The functioning of a public consultation and familiarity with legal texts
Habitus	Defer to the Latourian analysis chapter
Symbolic violence	The concealment of important information

Table 9 – Recapitulative Table for the Political Field

informatisé qui l'accompagne et sur la création d'une banque de données centrale viendra après coup, une fois que le gouvernement aura arrêté sa décision finale."

The above table summarizes the different notions covered in this chapter. Note that the example of habitus is deferred to a later chapter where ANT concepts such as individualizers and articulators will come to the rescue, allowing us to better analyze the dispositions of the participants.

Concerns from the Welfare Field

Second stop – The battle of the rights

IN the present section, the term welfare is taken very broadly. It can either mean the comfort of all as in the nation's welfare; refer to allocations that compensate for a lack of resources as in to be or to live on welfare; or imply an ideal model of provision to the citizens as in the welfare state.

More precisely, the welfare field encompasses three types of benefits: means-tested, contributory and universal benefits (Peillon 1998). In a means-tested programme, the government makes provision for a minimum income, so that benefits (cash or services) are granted to people who meet a test of need based on income and assets. The different social welfare programmes in Canada are examples of this. In a contributory programme, provisions are made for the reduction of economic insecurity; hence benefits are based on paid contributions in conformity with a contract. Canada's Employment Insurance (EI) and Pension Plan (CPP) programmes (or any other private pension plan initiatives for that matter) are examples of this. Finally, a universal social programme is one that provides a range of social services to all members of society, wherein benefits are the same for all, independently of income or wealth. The provincially governed health care programmes throughout Canada are examples of this. Stakes are very high for any social entities (government or others)

that want to change such programmes considering that people have come to believe that they are entitled to these goods and services (Redden 2002).

We have already mentioned that political capital refers to the control over the distribution of goods and services. It is therefore equally important in the welfare field, where the control over the delivery of social programmes is crucial. Beyond the politicians who, as we have demonstrated thus far, possess political capital because they play within the political field, political capital is also found whenever an individual is appointed "spokesperson" for a group of people so as to influence the level of benefits it receives.

According to Peillon (1998, p. 217), there is another type of capital that matters in the welfare field: "the capacity of agents in the field to accede to "individuals" in order to mould their behaviour." In Bourdieu's terms, we are faced here with statist capital, a meta-capital:

> [...] which enables [people] to exercise power over the different fields and over the different species of capital, and especially over the rate of conversion between them (and thereby over the relations of force between their respective holders). (Bourdieu 1998)

The *illusio* of the welfare field is quite simple: gaining maximum legitimacy for social expenditures/advantages. From the government's point of view, economic capital is exchanged for symbolic capital. This conversion occurs in different manners, for instance, by providing employees with fringe benefits and voters in general with

social programmes. In order to receive these benefits, citizens must comply with the economic and political requirements of the system (Peillon 1998).

An additional complexity within the welfare field is related to the different types of capital used by agents who operate within it. Doctors, teachers, social workers, priests, individuals receiving welfare benefits all aim at converting the resources they possess into the kinds of capital which they seek to accumulate. And considering that the *illusio* of the field rests on legitimacy, it is not surprising to see that claims within this field are strongly based upon a language of "rights." But what exactly is a right?

At least three different meanings can serve to evaluate social (hence health care) rights (Redden 2002). The first concerns human rights, also referred to as first-order human rights or human rights in the "strong sense." These rights guide government or political communities and cannot be altered without a strong moral justification. The second concerns human rights in the "weak sense," and it refers to the objective *ius* of early Roman Law. These rights are based upon a normative evaluation of the situation, an assessment leading to one or more actions considered as being the "right thing" to do under the circumstances. The third concerns legal rights, and it basically refers to claims that resort to the law.

Redden (2002) believes that the right to health care is best explained by the weak sense of human rights. As such, calls for the maintenance of a universal health care system are mostly based on a just expectation (Dyck 1994). But she also concedes that the claims have become more and more legalistic in nature over the years.

The Panorama

During the public hearing and amongst the briefs submitted, several rights were mentioned: the right to freedom, the right to life, the right to health, the legal right of equality in the face of sickness and death, the right to dignity, the right to professional secrecy, the right to privacy, the right to choose between the private and the public, the right to a just remuneration, the right to rectify information, the right to get a second opinion, and the right to be informed about the costs. Whereas some were only pointed out *en passant*, others were of great concern and will therefore be accounted for in the rest of this chapter. As in the previous chapter, the following paragraphs are mostly composed of verbatim quotations since they translate best the atmosphere of the hearing.

A resource that was deemed crucial for many individuals and groups in the welfare field was privacy and the "right to privacy," which was a recurring theme throughout the process. Participating groups such as the Commission d'accès à l'information (CAI – Access to Information Commission)[57] and the Protecteur du citoyen (PC – Quebec Ombudsperson)[58] based most of their arguments on this right, as it is part of their respective mandates to do so. One of the biggest concerns fell under the realm of the "right to privacy": fragmented (or discretionary) consent. This concept was part of the several official notices that the CAI put forward to the government regarding

[57] This entity is responsible for administering the Act respecting access to documents held by public bodies and the protection of personal information, and also responsible for the application of the Act respecting the protection of personal information in the private sector. http://www.cai.gouv.qc.ca/index-en.html.

[58] The Quebec Ombudsperson is responsible for protecting citizens' rights by intervening with departments and agencies of the Government of Québec, including those in the health and social services network, to correct any prejudicial situations affecting citizens individually or as a group. http://www.protecteurducitoyen.qc.ca/en/mandat/index.asp.

the different smart card projects over the years, and it made it to the pre-bill. It basically meant that the patient was allowed to decide piecemeal which of their health information they wanted to see added to their health summary. They could therefore choose to subtract any information they deemed too sensitive or personal such as a psychiatric condition, a previous abortion or a sexually transmitted infection, simply by asking the health professional not to include it in the file. To this effect, here is an excerpt from CAI's notice to the government:

> Thus, the following clauses were always put forward:
> - A Health Card Record cannot be created without the user's free and informed consent;
> - The user must also consent to the inclusion of data in his Health Card Record at every consultation;
> - The user can therefore refuse to see certain data included in his record, by the same token he can ask that certain information that has already been filed be removed from the Health Card Record[59] (CAI 2001, p. 6)

and an excerpt from the PC brief:

> The necessity of obtaining consent for either step seems to show that the health information summary is really organized for the benefit of the user such that he can remain in control of both the content and its usage.[60] (PC 2002, online version, 4th paragraph)

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[59] "Ainsi, les modalités suivantes ont toujours été mises de l'avant :
- La création d'un Dossier Carte Santé ne peut se faire sans un consentement libre et éclairé exprimé par l'usager;
- L'usager doit également consentir, lors de chaque consultation, à l'inscription de données dans son Dossier Carte Santé;

L'usager peut donc refuser que certaines données soient inscrites à son dossier, tout comme il peut demander que certaines informations déjà inscrites puissent être retirées de son Dossier Carte Santé"

[60] "L'obligation d'obtenir son consentement à l'une ou l'autre de ces étapes m'apparaît démontrer que le résumé de renseignements de santé est réellement mis en place au bénéfice de l'usager et que ce dernier peut demeurer maître de son contenu et de son utilisation."

In addition to the CAI and the PC, other groups such as the Association sur l'accès et la protection de l'information (AAPI – Association for the Access to and Protection of Information), the Comité des orphelins et orphelines de Duplessis (COOID – Duplessis Orphans Committee), the Conseil pour la protection des malades (CPM – Council for the Protection of Sick People), the Association des groupes d'intervention en défense de droits en santé mentale du Québec (AGIDD-SMQ – Association of Mental Health Rights Protection and Advocacy Groups) and the Chambre des notaires du Québec (CNQ – Quebec chamber of (civil law) notaries) welcomed this initiative.

There is another governmental agency that is responsible for the promotion of the two access to information Acts. In contrast to the CAI, which is under the authority of the Assemblée Nationale du Québec (ANQ – Quebec National Assembly)[61] and is mainly a supervisory body for the community, the AAPI is financed in part by the Ministère du Conseil Exécutif[62] and its mandate is to inform and educate the public and private employers. Although they believed discretionary consent to be a good idea, they admitted that it would probably be very difficult to implement, as shown in this passage:

> Our association would also like to underscore the flexibility of the consent of inscription, as stipulated in article 54; and to praise this initiative. This new way of foreseeing consent, which we could describe as fragmented or partial, could be very interesting for other areas where members of our association are involved.

[61] The official denomination of the Quebec legislative assembly
[62] The executive function of the government commonly referred to as the Cabinet

> We however question the practicality of implementing such practices, especially as the individual will be reserved the right to consent to a professional's inclusion of information in his summary each time he receives a service in the health and social services network.[63] (AAPI 2002, p. 16).

The COOID represents the thousands of orphaned children who were falsely certified as mentally ill and confined to psychiatric institutions from around 1940 to 1965. The AGIDD-SMQ, on the other hand, provides information to people who are experiencing, or have experienced, a mental health problem, guiding them in exercising their rights and recourses, providing a counterbalance in relations with authorities, acting as a spokesperson for them and bringing the issues before concerned authorities. Both of these organizations deal closely with mental health situations; the former was concerned by the impact on the quality of care provided to patients whose false diagnosis would automatically be obtained by doctors via the health summary, whereas the latter was apprehensive about the impact on the quality of care provided to patients whose real, yet passed, diagnosis would be available through the health summary. This may seems trivial to some, but the following excerpt from one of the AGIDD-SMQ representatives at the commission is telling:

> Mr. Laroche (Francis): Once, only once, I went to the Royal Victoria's emergency ward for something other than my mental health. For me, this was my hospital. I had been there so often that it was an automatic reflex for my legs to carry me there. I should have thought about it though. I was there for a very silly injury caused by a bad fall. I picked up my arm as best

[63] "Notre Association tient aussi à souligner la souplesse des consentements à l'inscription prévus à l'article 54 et à féliciter cette initiative. Cette nouvelle façon de concevoir des consentements qu'on pourrait qualifier de fractionnés ou de partiels pourra s'avérer intéressante dans d'autres secteurs d'activités où œuvrent les membres de notre Association.
Nous nous interrogeons toutefois sur la facilité de mettre en œuvre de telles pratiques particulièrement lorsque la personne se réservera le droit de consentir à ce qu'un intervenant inscrive à son résumé chaque renseignement à chaque fois où un tel intervenant lui fournira des services de santé ou des services sociaux."

I could and went. In the emergency ward, I don't know if you know, but there's a waiting time, which allowed the lady behind the counter not only to finish her manicure, but also to fetch my file. You see, I handed in my health insurance card and, out of habit, my hospital card. Cigarette smoking is not the only bad habit out there. When it was finally my turn, the resident had looked at my file, a file that only contains psychiatric information. So, I earned myself a complete cross-examination in relation to my drug consumption. He asked me whether I was mixing alcohol with my pills, whether I had used some other less legal substance, not prescribed by my doctor. This wasn't the case, but I was starting to feel like it.

Not satisfied with my run-of-the-mill story about a bad fall on the sheet of ice that covered the exact location on the sidewalk where I place my trash twice a week with clockwork regularity, he made me wait, wait without any care for my arm, I was however visited by the psychiatrist on call. My wrist and my arm are now bigger than my thigh, it is becoming more and more painful, and the comedian on call asks me if I am tense, if I am experiencing any stress at home and whether this might have made me forget to take my medication or forget that I had already taken it.

After a couple of completely surreal hours, I was allowed x-rays, a cast, and a prescription for Rivotril. Rivotril is a anxiolytic. I am not a CPS[64] expert but I don't think Rivotril is often prescribed to people suffering from several small broken bones in their wrist. Today, my relatives know that if something happens to me, if I have an accident, they should not bring me to the Royal Victoria Hospital because there, once I've been identified, they will pull out my medical file and I will not be treated like a person who doesn't have a history of mental illness.[65] (Quebec Hansard, March 7 2002)

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[64] The Compendium of Pharmaceuticals and Specialties, more commonly known by its abbreviation CPS, is a book published annually by the Canadian Pharmacists Association that lists commonly used pharmaceuticals in Canada.

[65] "Une fois, une seule fois je suis allé à l'urgence du Royal Victoria pour autre chose que pour ma santé mentale. Pour moi, c'était mon hôpital. J'y allais si souvent que mes jambes m'y ont emmené sans que j'y pense vraiment. J'aurais dû y penser, pourtant. J'étais là pour une blessure toute bête que je m'étais faite en tombant. J'ai ramassé mon bras tant bien que mal et je suis parti. À l'urgence, je ne sais pas si vous le savez, il y a un délai d'attente, ce qui a permis à la dame derrière le comptoir non seulement de finir sa manucure, mais aussi d'aller chercher mon dossier. Voyez-vous, j'ai tendu ma carte-soleil et, par habitude, ma carte d'hôpital. Il n'y a pas que la cigarette qui soit une mauvaise habitude. Quand ce fut finalement mon tour, l'interne avait consulté mon dossier, dossier qui ne contient que des renseignements d'ordre psychiatrique. Alors, j'ai eu droit à un interrogatoire sur ma consommation de médicaments. Il m'a demandé si je mélangeais l'alcool à mes médicaments, voir si je n'avais pas utilisé

Finally, the CNQ's principal purpose is to protect those members of the public who use the services of civil law notaries. This organization got involved in the debate because its members felt responsible for examining dispositions that could potentially have important consequences on Quebec's society (CNQ 2002, p. 2).

Three individuals also presented concerns about the right to privacy in their brief: Chantal Mino, Donna Farmer and François Marinier. Mrs. Mino is an educational therapist, Mrs. Farmer is an informal caregiver and Mr. Marinier is a computer specialist and the father of a 5-year old son who had won a battle against cancer two years before the public hearing. These three participants shared a history of strained relationships with health care officials and felt strongly about the matter of privacy, as this can be seen in the following excerpts:

> Mrs. Mino (Chantal): (...) In healthcare, even if it is a right, the right to health, one cannot force a relationship based on trust. It cannot be forced, it must be acquired. But this is what I see, they want to force a trust-based relationship. Well, I am sorry it cannot be forced, it must be acquired. And how can it be acquired? With respect.[66] (Quebec Hansard, March 28 2002)

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d'autres substances moins légales et non prescrites par mon médecin. Ce n'était pas le cas, mais je commençais à en avoir le goût.
Insatisfait de ma banale histoire de chute sur une couche de glace qui recouvrait la partie exacte du trottoir où je place mes sacs de vidange avec une régularité de métronome deux fois par semaine, il m'a fait attendre, attendre sans soins pour mon bras, et j'ai eu droit à la visite du psychiatre de garde. J'ai le poignet et le bras rendus plus gros que la cuisse, ça fait de plus en plus mal et l'humoriste de service me demande si je suis tendu, si je vis du stress à la maison et si tout cela ne m'avait pas fait oublier de prendre mes médicaments ou oublier que je les avais déjà pris.
Après les quelques heures tout à fait surréalistes, j'ai eu droit à des radiographies, un plâtre et une prescription de Rivotril. Rivotril est un anxiolytique. Je ne suis pas un expert du CPS, mais je ne crois pas que le Rivotril soit couramment prescrit lorsque quelqu'un se brise plusieurs petits os du poignet. Aujourd'hui, mes proches le savent, s'il m'arrive quelque chose, si j'ai un accident, ils ne m'amènent pas au Royal Victoria parce que, là-bas, une fois que je serai identifié, ils vont sortir mon dossier médical et je ne serai pas traité comme le serait quelqu'un qui n'a pas de vécu en santé mentale."

[66] "Mme Mino (Chantal) : (...) En santé, même si c'est un droit, la santé, on ne peut pas obliger une relation de confiance, là. Ça ne s'oblige pas, ça, ça s'acquiert. Et c'est ça que je vois, c'est qu'on veut

> Mrs. Farmer (Donna): (...) I worry about the safety of the handicapped and infirm being compromised, should both their infirmities and addresses be accessible to so many people. (...) [Y] ou should not force full disclosure as that could prove harmful and even jeopardize the health you are seeking to protect[67]. (Quebec Hansard, March 7 2002)

Mr. Marinier was the only one to offer an alternative solution. He argued that it would technically be possible to allow for discretionary consent if every health summary were coded with a governmental public key infrastructure and consent was dealt with more finely at consultations, i.e., the patient could grant access to specific types of information one at a time, based on the situation encountered. It is important to note that all who voiced concerns about privacy were either beneficiaries[68] or governmental bodies representing them.

The notion of discretionary consent had many objectors, mostly from the providers' side. An important exception to this comes from Diabète Québec (DQ – Quebec Diabetes Association), whose members are dealing with a systemic disease and are anxious for such a health summary.

> One of the major elements in effectively treating individuals with diabetes is access to a multidisciplinary team of health professionals, working in total coordination and with access to a complete and up-to-date patient file.
>
> [...]

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obliger une relation de confiance. Bien, je suis désolée, ça ne s'oblige pas, ça s'acquiert. Et ça s'acquiert comment? Par le respect."

[67] In English in the verbatim.

[68] I am using *beneficiaries* here for lack of a better term, not because I consider these people to necessarily benefit from the smart card, but rather in opposition to the health care professionals who will be identified as *providers*.

> There are many complications associated with diabetes. Be it for the treatment of hypertension, cholesterol, cardiac or thyroid problems, renal failure, sexual dysfunction, foot ulcers, retinitis or nephrology, diabetes involves the intake of several medications. Therefore, for a diabetic, it's not always easy to make sense of the multitude of products and variety of dosages.
>
> The health smart card will allow a patient to feel more secure when dealing with a health professional who wants to know his/her therapeutic reality. The card alleviates the stress of the patient who is often nervous and uncomfortable in such situations, and who may forget to mention some of the medications he/she is taking.[69] (ADQ 2002, pp. 7, 9)

As was the case for the diabetics above, the arguments voiced by several medical professional federations against the discretionary consent solution were often based on another important resource within this field – health – and the right to proper care that comes with it. One must not forget that the public health care system in Canada stands on the principle of equal access for everyone and was built upon assertions about the "right to health care." (Redden 2002)

This was best presented by Dr. Bessette. At first, he took a moderate line and quoted the report written for the second health smart card pilot scheme:

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[69] "Un des éléments majeurs de tout traitement efficace des personnes atteintes est l'accès à une équipe multidisciplinaire de professionnels de la santé, qui travaillent en totale coordination et ont accès au dossier complet et à jour du patient.
[...]
Les complications associées au diabète sont nombreuses. Que ce soit pour le traitement de l'hypertension, du cholestérol, de problèmes cardiaques ou de glande thyroïde, d'insuffisance rénale, de dysfonction sexuelle, de plaies de pieds, de rétinopathie ou de néphrologie, le diabète nécessite le recours à de nombreux médicaments. Or, pour la personne atteinte, il n'est pas toujours aisé de s'y retrouver dans cette panoplie de produits différents et de posologie variées.
Le projet de carte santé permettra au patient de se sentir plus en sécurité face au professionnel de la santé qui désire connaître sa réalité thérapeutique. Elle enlève un stress au patient qui est souvent nerveux ou mal à l'aise dans ces situations ou qui a peut-être parfois tendance à oublier certains médicaments auxquels il a recours."

> Paradoxically, the most troubling element in the Health Card project is the accent on security (illegibility of the data) and the complete control given to the patient in terms of feeding and consulting the clinical data. The priority given to security greatly reduces, from the health professionals' standpoint, the system's usefulness. The data securing objective seems to have gotten the upper hand on the objective of building an information system that would be useful and adapted to the requirements of collaborative care and health system management. On this matter, a more thorough analysis that would include the right to health, and not only the right to privacy, should be conducted.[70] (Sicotte 2002a, p. 56 as quoted in Bessette 2002, p. 5)

Then he became more assertive:

> Put less diplomatically, the requirements commanded by the Access to Information Commission are part of the problem, not the solution. Also, a major refocusing of the priorities is necessary if the Health Smart Card project is to gain the interest and adherence of health professionals.[71] (Bessette 2002, p. 5)

This opinion was shared by other participants, as the Association des optométristes du Québec (AOQ - Quebec Optometrists Association) puts it: "Must the right to health funded by public monies have precedence over the protection of individual

[70] "L'élément le plus troublant du Dossier Carte Santé demeure paradoxalement l'accent qui est mis sur la sécurité (illisibilité des données) et le contrôle complet donné au patient quant à l'alimentation et la consultation des données cliniques. Cette primauté donnée à la sécurité a pour effet de grandement diminuer, du point de vue des professionnels de la santé, l'utilité de ce système. L'objectif de sécurisation des données semble avoir pris le dessus sur l'objectif de constituer un système d'information utile et adapté aux exigences de la pratique clinique ainsi qu'aux exigences de la gestion du système de soins. Sur ce plan, une analyse plus complète envisageant le droit à la santé, et non pas seulement le droit à la vie privée, devrait être de mise."

[71] "Dans un langage moins diplomatique, les exigences que semblent avoir commandées la Commission d'accès à l'information font partie du problème et non de la solution. Aussi, il faudra un profond recentrage des priorités pour que le projet de carte santé gagne l'intérêt et l'adhésion des professionnels de la santé."

rights or should the protection of individuals' information rights take precedence over the right to health funded with public monies?" [72] (Quebec Hansard, March 14 2002)

So far, the rights to privacy and health were covered. A paramount resource of these two rights is liberty, since, according to the Canadian Constitution, the right to freedom prevails over all others. Nathalie Michaud from Option Consommateurs (OC – Consumers' Option) – a not-for-profit association with the mission of promoting and defending consumers' basic rights, as well as ensuring that they are recognized and respected – expressed this well:

> Mrs. Michaud (Nathalie): [...] First, personal freedom is the cornerstone of our political system. Second, it is therefore up to each individual to freely weigh, in an informed manner, how his/her right to life, to dignity, to health, to professional secrecy and to privacy will be enforced. Third, greater importance must be given to an individual's choices in these matters than to the willingness of health care workers to treat the person in the best way possible. Fourth, greater importance must be granted to individual's rights and obligations than to administrative needs or scientific research needs. Fifth and finally, the institutional mechanisms put forward by the government must be modeled on these principles.[73] (Quebec Hansard, March 21 2002)

She later adds:

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[72] "Est-ce que le droit à la santé payé par les fonds publics doit primer sur la protection des droits individuels ou est-ce que c'est les droits individuels de protection de renseignements qui doivent primer sur le droit à la santé payé par les deniers publics?"

[73] "Mme Michaud (Nathalie) : (...) Premièrement, la liberté de la personne constitue la valeur fondamentale de notre système politique. Deuxièmement, il appartient donc d'abord à la personne de pondérer librement et de manière éclairée l'application de ses droits à la vie, à la dignité, à la santé, au secret professionnel et à la protection de sa vie privée. Troisièmement, on doit accorder plus d'importance au choix de la personne dans ces matières qu'à l'obligation et à la volonté du personnel soignant de traiter la personne le mieux possible. Quatrièmement, on doit accorder plus d'importance à ses droits et à ses obligations qu'aux besoins administratifs ou aux besoins en matière de recherche. Et enfin, cinquièmement, les mécanismes institutionnels mis en place par l'État doivent se conformer à ces principes."

> Mrs. Michaud (Nathalie): [...] We allow very sick people to refuse certain treatments. Any citizen should therefore be allowed to decide whether some information about his health condition will be disclosed or not, even when secrecy could affect his health.[74] (Quebec Hansard, March 21 2002)

The representative from the Commission des droits de la personne et des droits de la jeunesse (CDPDJ - Human and Youth Rights Commission) voiced very similar concerns. The CDPDJ promotes and upholds the principles enunciated in the Charter of Human Rights and Freedoms and ensures the promotion and protection of the rights of children, as recognized by the Youth Protection Act and the Youth Criminal Justice Act.

One thing that must be free, and that was a matter of concern for several groups and individuals during the public hearing is consent, as in the ability to provide a free and informed consent. The source of this argument was often the opting-out method introduced in the pre-bill. In a nutshell, it stipulated that every citizen would have a health smart card that, for administrative purposes, would replace the current "sun card"[75] and that, by default, every citizen would accept that their health summary be built. Citizens who disagreed with this premise would simply file a paper to opt-out.

In general, privacy organizations such as the CAI wanted the project to be deployed with the opting-in method. This was, according to them, the only way to make sure that consent was genuine, free and informed. On the other hand, doctors were completely against the opting-in method, arguing that they would end up with the

[74] "Mme Michaud (Nathalie) : (...) On permet à des personnes gravement malades de refuser qu'on poursuive certains traitements. Le citoyen devrait alors pouvoir aussi décider qu'on divulguera ou non des renseignements qui concernent son état de santé, même si le secret pourrait avoir des effets sur sa santé."

[75] The common name of the health insurance card since it has a picture of a sun on it.

burden of having to explain the pros and cons of the health summary to their patients, which would take too much time, a resource that they lack.

Earlier, we opposed the right to privacy to the right to health, but concerns about the latter were also voiced by groups who framed it as a financial issue. As mentioned earlier, money is an important resource within the welfare field, as it serves to obtain government legitimacy. If it has not secured public support, the government must consider investing its money differently. The CPM's argument was based on this consideration. CPM is an NPO devoted to defending and protecting the rights of health care users, more specifically sick, elderly, psychiatric or handicapped individuals.

> Is it appropriate to invest tens of millions of dollars in such a project when the health care system is still dealing with budget cuts? It is important to specify that the $150 million to be invested over four years do not include the fees that the health organizations and the clinics will have to incur to upgrade and or the acquire computer equipment. Who will pay? Would it not be wiser to invest the money directly into health care?[76] (CPM 2002, p. 9)

This opinion was shared by many other groups. The following excerpts from Dr. Tremblay and the Fédération des médecins résidents du Québec (FMRQ – Quebec Resident Doctors Federation) exemplify this:

> It's high time that our DEAR government stop fostering and continually investing new monies into a system where bureaucracy is increasingly

[76] "Est-il opportun d'investir des dizaines de millions de dollars dans un tel projet alors que le système de santé vit encore la crise des compressions budgétaires? Il faut spécifier que les 150 millions de dollars à investir sur quatre ans dans ce projet n'incluent pas les frais que tous les établissements de santé et cliniques devront encourir pour la mise à jour et l'achat d'équipements informatiques. Qui paiera la note? N'est-il pas plus judicieux d'investir l'argent directement dans les soins?"

> intrusive. The hundreds of millions of dollars anticipated for the implementation of this card will not shorten the outrageous waiting times for cardiac surgery (and for most surgeries in Quebec), for radiotherapy treatment for cancer patients, in psychiatry and for extended care. We cannot tolerate the inadmissible and traumatizing delays in surgeries due to hospitals' lack of money. What can be said about the shortage of nurses which endangers the quality of care (especially because of the decisions of this same government). I suggest investing directly into the human capital of health professionals rather than in bureaucracy.[77] (Tremblay 2002, p. 4)

> Quebec's Health Card Pre-bill appears way too costly in relation to expected benefits, especially in a context where medical equipment is lacking, where the number of professionals is insufficient, where waiting lists are getting longer, where emergency wards are still overcrowded, where home health care programmes are deficient and, finally, where other pilot schemes that proved their efficiency, like the SIPA project, have been abandoned.[78] (FMRQ 2002, p. 10)

As a matter of fact, the Minister often mentioned that it was not because investments were being made in the smart card project that other areas in need would not receive financing as well.

> Mr. Bertrand: [...] We see what is being proposed as a complement that will allow us to improve, to work more rapidly, and to have the best possible reading of the client's needs. We often say: We can chew gum and walk at the same time. It's not because we put, let's say, $100 million into such a system that we don't continue improving services as a whole as

[77] "Il serait temps que notre très CHER gouvernement cesse de favoriser et d'investir continuellement de nouvelles sommes dans la bureaucratie de plus en plus envahissante du système. Les centaines de Millions$ prévus dans l'application de cette carte ne peuvent permettre de faire diminuer les délais d'attente scandaleux, en chirurgie cardiaque (et même de la plupart des chirurgies au Québec), en radiothérapie chez les personnes atteintes d'un cancer, en psychiatrie, et pour les soins prolongés. On ne peut tolérer sans rien faire les reports inadmissibles et traumatisants des chirurgies par manque de budget hospitalier. Que dire des pénuries en soins infirmiers qui mettent en danger la qualité des soins (surtout à cause de décisions du même gouvernement). Je suggère d'investir directement dans le capital humain des intervenants de la santé plutôt que dans la bureaucratie."

[78] "L'avant-projet de loi relatif à la Loi sur la carte santé du Québec apparaît comme étant beaucoup trop coûteux pour les bénéfices que l'on peut en espérer, particulièrement dans un contexte où l'équipement médical fait défaut, où le nombre de professionnels est insuffisant, où les listes d'attente s'allongent, où les salles d'urgence continuent de déborder régulièrement, où les programmes de soins à domicile sont déficients et où, enfin, d'autres projets-pilotes ayant démontré leur efficacité, comme le projet SIPA, sont délaissés."

> well, but perhaps the gains in efficiency that this allows – in terms of clinical performance – that such a system allows, will see to it that in the end, we will provide better services to the population than if we were to go without such a tool.[79] (Quebec Hansard, March 21 2002)

This argument is somewhat strange considering that budgets are not infinite and that governments must make choices to ensure that public expenditure is managed responsibly. Offering such an empty response can be seen as a minister's tactic to maintain his level of symbolic power.

I already mentioned that doctors were against the opting-in method because they deemed it too time-consuming. But this is not the only place where time was viewed as capital. Even with the opting-out method, doctors felt that they would ultimately waste precious minutes simply in consulting or updating records, as shown in the following quote:

> If I take, for instance, my practice as a family doctor, considering that 40 to 50 patients consult me during a 10-hour shift. If it takes me 4 additional minutes to consult or update each file, then I will have 3 less hours to spend with my patients every day. No increased work time can compensate for this loss. We will then be faced with decreased access to first-line medical care, which is already at a critical level.[80] (Tremblay 2002, p. 3)

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[79] "Dans notre conception de ce qui est proposé, c'est un complément qui permet d'améliorer, d'aller plus vite, d'avoir la meilleure lecture possible du besoin du client. On dit souvent: On est capable de mâcher de la gomme puis de marcher en même temps. Ce n'est pas parce qu'on mettrait, disons, 100 millions de dollars dans un système semblable qu'on ne continue pas d'améliorer l'ensemble des services, mais peut-être que les gains d'efficacité que nous apporte – en termes de performance clinique – que nous apporte un tel système va faire en sorte qu'au bout de la ligne on va rendre de meilleurs services à la population qu'en se privant de ce genre d'outil."

[80] "Si je prends l'exemple de mon travail de médecin de famille, considérons que 40 à 50 patients me consultent dans un quart de travail de 10 heures. Si je mets 4 minutes de plus pour consulter ou mettre à jour un dossier, il faut alors compter 3 heures de moins de contact-patients par jour. Il ne peut y avoir aucun gain de temps, en pratique, pour compenser cette perte. On assistera alors à l'aggravation de la difficulté d'accessibilité, déjà rendue à un point critique, à des soins médicaux de première ligne."

This is mainly due to the fact that the new data in the health summary would be an addition to the legal medical files that are already completed by doctors, not a replacement. Here is a quote from the Fédération des médecins spécialistes du Québec (FMSQ – Quebec Medical Specialists Federation):

> In the face of current medical and nursing staff shortages, we mustn't increase the administrative tasks of health professionals, who already have a great difficulty meeting the population's health care needs. The role of physicians is first and foremost to treat patients and the time allotted to this end should not be questioned.
>
> One can easily imagine the magnitude of work carried out by a physician who sees several dozens of patients in a day and the possible impact of any new administrative task, notably regarding noting down data in the patient health summary! What's more, the health summary does not replace the medical file that physicians must already complete and maintain for each patient, in institutions as well as in private clinics.[81] (FMSQ 2002, p. 5)

Finally, some health professionals were concerned about their symbolic power, which for them translates into credibility and reputation. This resource gained with difficulty over years of study and practice can disappear in a flash in case of medical malpractice. This point was raised by the Barreau du Québec (BQ – Quebec Bar Association) amongst others who, as lawyers, perceived a big flaw in the project as

[81] "Devant les pénuries actuelles en effectifs médicaux et infirmiers, il importe de ne pas accentuer l'ampleur des tâches administratives des professionnels de la santé, lesquels ont déjà beaucoup de difficultés à satisfaire à la demande de soins de la population. Le rôle des médecins consiste d'abord et avant tout à soigner leurs patients et on ne saurait remettre en question le temps consacré à cette fin.
On peut facilement imaginer l'ampleur du travail actuel du médecin qui voit plusieurs dizaines de patients au cours de la journée et l'impact que pourrait avoir toute nouvelle tâche administrative, notamment au niveau de l'inscription des données au résumé de santé du patient! Qui plus est, le résumé de santé ne se substitue pas au dossier médical que le médecin doit constituer et maintenir pour ses patients, autant en établissement qu'en cabinet privé."

presented in the pre-bill. The following quotes illustrate the situation well. The first is from the AOQ:

> If, for instance, I discover a herpetic keratitis in patient x, y or z, this happens once in a while – it's not the venereal disease, it's the cold sore virus finding its way into the eye – the patient, who hears herpes, he may confuse certain notions and say: "Oh no, I don't want that written in my file." However, this is one of the most recurring things in the world and it must be treated as quickly as possible if it recurs. Then, if the patient is not close to my office the day this happens, and the general physician sees that the eye was red in 1998 but does not know what it was, he will think that it is simply a conjunctivitis, will prescribe an antibiotic and ask the patient to come back in a week if the treatment is not working. But after a week, herpes will have caused damage and the patient will, well, even have partial loss of eyesight because of it. So, this is the type of problem... The fact that I saw, that I treated the patient does not mean that the patient will remember exactly what he/she had and the name of the medication taken, but if the patient forbade me from writing a note in the file, who will take responsibility for that?[82] (Quebec Hansard, Marc 14 2002)

The second one is from Dr. Bessette, a family doctor from Quebec City:

> Besides, how exactly will "informed" consent be exercised? How indeed will the patient be informed of the more or less sensitive nature of some information that could make it to the health summary? Let's take, for example, a drug addict with AIDS who is consulting an emergency ward for a fever... What will be sensitive in his episode of care?... The drug addiction diagnosis? Of AIDS? The blood profile showing leukopenia (due to AIDS)? The CT scan showing toxoplasmosis (due to AIDS)? The positive serology for hepatitis C (due to drug addiction)? The cardiac

[82] "Si, par exemple, je découvre une kératite herpétique chez un patient x, y ou z, ce qui arrive de temps en temps – ce n'est pas la maladie vénérienne, là, c'est le virus du feu sauvage qui peut se retrouver dans l'œil – le patient, lui, il entend ça, herpès, il mélange peut-être des notions, il dit: Ah non, je ne veux pas que ce soit indiqué dans mon dossier. Sauf que c'est une des choses qui est les plus récidivantes au monde puis c'est une des choses qu'il faut traiter le plus rapidement possible si ça récidive. Alors, s'il n'est pas proche de mon bureau la journée que ça récidive, que le généraliste, il voit qu'il y a eu un œil rouge en 1998, mais qu'il ne sait pas c'est quoi, l'œil rouge, il va penser que c'est banal, que c'est une conjonctivite, il va lui donner un antibiotique et revenir dans une semaine si ça ne marche pas. Mais, au bout d'une semaine, l'herpès va avoir fait son problème, puis, bon, évidemment, le patient peut même aller jusqu'à perdre une partie de sa vision à cause de ça. Alors, c'est le genre de problème... Le fait que je l'ai vu, que je l'ai traité, le patient ne se rappelle plus exactement ce que c'était puis le médicament qu'il a eu, mais le fait que le patient m'ait empêché de l'indiquer au dossier, qui va être responsable?"

> ultrasound showing vegetations (due to drug addiction)? The chest X-ray showing cannonball opacities (due to drug addiction)? The positive blood culture (due to the drug addiction)? The buccal moniliasis (due to AIDS)? Or even the list of medications (due to AIDS)?
>
> Will we be forced to provide a medical course to everyone? [...] And, if, based on some of the laboratory or medical imaging data found in the health summary, a physician can infer a presumptive and "sensitive" diagnosis, which the patient did not consent to have written in his/her file, who should the CAI then sue? And on what grounds?[83] (Bessette 2002)

Based on the two quotes above, the danger seems real and unless this important point is addressed, chances are that many health professionals will simply not use the health summary in order to avoid the risk of law suits, and therefore protect themselves.

In this descriptive section, we have seen that individuals and groups sought to convert the resources they possessed into the type of capital they wished to accumulate (or at least to maintain). For some, privacy was paramount and losing it would amount to a loss of symbolic capital (either for the province as a whole, which would be seen as a nation that does not protect its citizens' privacy, or for individuals with specific health conditions they wish to keep secret). For many, health was paramount and this

[83] "D'ailleurs, comment sera exercé ce consentement 'éclairé' dans les faits? En effet, comment le patient sera-t-il informé du caractère plus ou moins 'sensible' d'une information qui pourrait être colligée à son résumé de renseignements médicaux? Prenons par exemple le cas d'un toxicomane sidéen qui consulte en salle d'urgence pour une fièvre... qu'est-ce qui sera sensible dans son épisode de soins?... Le diagnostic de toxicomanie? De SIDA? La formule sanguine qui montre une leukopénie (associable au SIDA)? Le CT-scan qui montre une toxoplasmose (associable au SIDA)? La sérologie positive à l'hépatite C (associable à la toxicomanie)? L'échographie cardiaque qui montre des végétations (associable à la toxicomanie)? La radiographie pulmonaire en lâcher de ballons (associable à sa toxicomanie)? L'hémoculture positive (associable à sa toxicomanie)? La moniliose buccale (associable au SIDA)? Ou même la médication de départ (associable au SIDA)?"
Faudra-t-il donner un cours de médecine à chacun? (...) Et, si à partir de données de laboratoire ou d'imagerie colligées au résumé de renseignements médicaux, un médecin est capable d'inférer un diagnostic présomptif et 'sensible' à l'inscription duquel le patient a refusé son consentement, qui la CAI devra-t-elle poursuivre? Et sur quelles bases?"

was mainly converted into symbolic capital in the case of health professionals, and indirectly into economic capital in the case of patients (assuming that one is not as productive when sick). For a few (the physicians), time was an important and rare resource and, considering the mode of remuneration of doctors in Canada, it translated directly into economic capital. Finally, money was an important resource for all stakeholders and it needed no direct conversion but, ultimately, spending decisions would have an impact on the government's symbolic capital.

Analyzing the Field

Capital Distribution

The welfare field is a space where different types of welfare benefits are at stake. It is broader than the welfare state because it also includes social services provided by other institutions (para-public, union, church, NPO, etc.), usually funded by a combination of the state and private sources and serving to improve the overall welfare (taken in the first sense) of the population (Titmuss 1958).

The types of capital at stake within the welfare field are mainly cultural (intellectual), economic and symbolic capitals, but political and statist capital are also at play, as mentioned earlier in this chapter. Figure 9 presents an overview of the welfare field. Once again, here, the locations are approximate and in relation to the other participants and to the Quebec Health Card project.

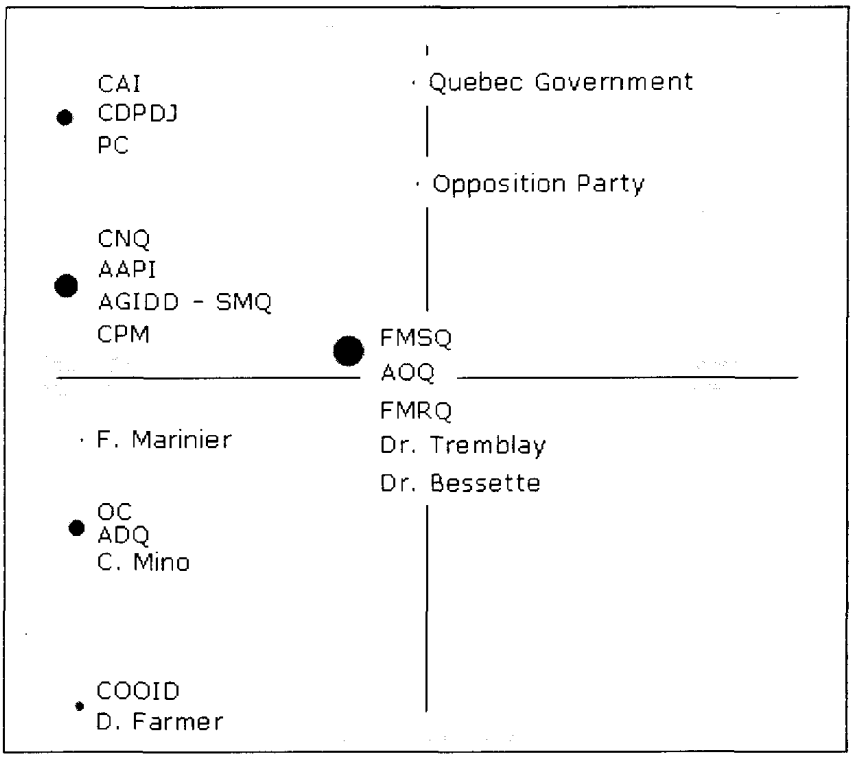

Figure 9 – The Welfare Field

The vertical axis discriminates the amount of overall capital, whereas the horizontal axis discriminates the type of capital prevailing. The individuals and groups at the bottom left of the figure have less overall capital and the little they have is composed mainly of cultural (intellectual, political, social or symbolic) capital. It is assumed that Mrs. Farmer and the COOID have less overall capital. Nothing was mentioned about the former's credentials in her brief or during the public hearing. We only know that she is an informal caregiver. Her brief was written with an old-fashioned typewriter, the layout was rather cumbersome and the sentences were often incoherent. The COOID represents orphaned children who were falsely certified as mentally ill in the middle of the twentieth century. Their brief contains, in large part, a plea to totally discard parts of their original medical records relating to their unjustified

institutionalization and false diagnosis of mental illnesses, but the pre-bill only covers the health summary. At some point during the hearing, the COOID spokesperson seems to realize that they have literally chosen the wrong forum for their arguments.

With more overall capital than Mrs. Farmer and the COOID, but a similar distribution between cultural and economic capital, there are Mrs. Mino, Diabète Québec, and Option Consommateurs. Then with a greater amount of overall capital, though mainly cultural, there is Mr. Marinier. The cluster formed by the FMSQ, the FMRQ, the AOQ, and Drs. Tremblay and Bessette is next in line on the vertical axis, meaning that they possess more overall capital. However, the distribution between cultural and the economic capital is more balanced for them considering the possible economic impacts of their decisions (i.e., even if the project is deployed, they may decide never to use it).

The next cluster is made up of the the AAPI, the AGIDD-SMQ, the CPM and the CNQ. Three of these associations are defence groups, whereas the fourth one represents (civil law) notaries. All of these groups are quite knowledgeable about the promotion and the protection of human rights.

The upper left cluster consists of the CAI, the CDPDJ and the PC. Just as in the previous cluster, the groups in this one are organizations that promote human rights and privacy. They are believed to have more overall capital overall to the others similar groups simply because their respective members are appointed by the government and they are accountable to the National Assembly. As such, the CAI

must uphold, by any appropriate measures, the Quebec Act respecting access to documents held by public bodies and the protection of personal information and the Quebec Act respecting protection of personal information in the private sector, the CDPDJ must do the same for the principles enunciated in the Quebec Charter of Human Rights and Freedoms. Both associations have investigative powers. The Quebec Ombudsman is responsible for protecting citizens' rights and for correcting any prejudicial situations affecting them either individually or as a group. It intervenes only in situations involving public services (including the provision of health and social services). Finally, government officials have a similar amount of overall capital, but it is more balanced between cultural and economic capital.

Symbolic Violence

The multiple references to the emergency doctors' opinion and the "consensus" about the principle of improving the circulation of health information in the network can be seen as symbolic violence within this field, since it can easily be misrecognized by citizens as better care for the patient. As such, it serves to legitimize the government's decisions. Despite the constant calls to order made by the member of the National Assembly (MNA) from the opposition, the Minister continues to begin his response to each presentation with such references, as if he wants to push the matter deeper into the audience's subconscious (including the media who are broadcasting the information). Below is an example of such a behaviour:

> Mr. Legault: I note in your brief that concerning the objectives, you share the same ones that we set out in the pre-bill. So, you are telling us in your brief that, for you, the sharing of information between professionals in the health network is important...[84] (Quebec Hansard, February 26 2002)

This was the first thing the Minister said after the presentation of the Ordre des Pharmaciens du Québec (OPQ – Quebec Order of Pharmacists). Yet throughout their testimony, the representative stated very clearly that they were against the project as presented in the pre-bill because it contained too many gray areas. Here is another excerpt and this time, the minister is not pleased with what he heard during Professor Prémont's presentation. He tries to make her to agree with him.

> Mr. Legault: Well, thank you, Mrs. Prémont. Well, I understand that you want to talk about the administrative side of the project, but, as you know, this is not the prime objective of this project. The main objective is a clinical objective. I myself would really like to hear you a little bit on the clinical part. To you, is the sharing of clinical information not inescapable within the present context of health care services in Quebec?[85] (Quebec Hansard, February 19 2002)

Again, recall that the sharing of clinical information makes for a tiny part of the pre-bill. Yet it is the point the minister keeps hammering home in his presentation of a government that "cares" for its citizens. Unfortunately for the elected party, this tactic fails to do its job, as it rapidly becomes an argument of choice for the opposition party. These two excerpts are good representations of this:

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[84] "M. Legault: Je note dans votre mémoire, donc, qu'au niveau des objectifs vous partagez les objectifs qu'on s'est fixés dans l'avant-projet de loi. Donc, vous nous dites dans le mémoire que, pour vous, c'est important, le partage de l'information entre les professionnels du réseau de la santé..."

[85] "M. Legault: Bon, merci, Mme Prémont. Bon, je comprends que vous voulez parler de la partie administrative du projet, mais, comme vous le savez, ce n'est pas l'objectif premier du projet. L'objectif premier, c'est un objectif clinique. Moi, j'aimerais vous entendre un petit peu, là, sur la partie clinique. Est-ce que pour vous le partage de l'information clinique, est-ce que c'est un incontournable dans le contexte québécois actuel de prestation des soins de santé?"

> Mr. Fournier: (...) I am highlighting these passages because just now the Minister said that: 'Basically, the divergence in opinion is simply about the tool.' The pre-bill is about the tool. We are talking about a tool. Because, if we want to talk about the importance of sharing, while protecting confidentiality, sharing health information in order to provide better treatments, I don't think we'll find a single soul who considers that this is a bad idea.[86] (Quebec Hansard, March 14 2002)

> Mr. Fournier: (...) The Minister talks about Dr. Bessette. He is the only one who came and said: "Me, the health summary, I'll take it." [...] So, you see, when we take the whole forest, we realize that it holds many different species of trees. And we can't just say: "There, it's a maple grove." Right now, there is only one maple tree in the whole forest.[87] (Quebec Hansard, March 14 2002)

Table 10 summarizes the different notions covered in this chapter. Again, the example of habitus is deferred to the Latourian analysis chapter.

[86] "M. Fournier: (...) Je souligne ces passages-là parce que tantôt le ministre disait: Dans le fond, la divergence qu'il y a, c'est simplement sur l'outil. Le projet de loi, c'est sur l'outil. On parle d'un outil. Parce que, si on veut parler de l'importance qu'il y a de partager, tout en protégeant la confidentialité, de partager des renseignements de santé pour donner des meilleurs traitements, je ne pense pas qu'on va trouver une personne qui va trouver que c'est une mauvaise idée."

[87] "Le ministre parle du Dr Bessette. C'est le seul qui est venu dire: Moi, le résumé de renseignements, je le prends. (...) Alors, voyez-vous, quand on prend l'ensemble de la forêt, on s'aperçoit qu'il y a beaucoup de sortes d'arbres différents. Et on ne peut pas juste dire: Voilà, c'est juste une érablière. En ce moment, il y a un érable dans toute la forêt."

Concepts	Example
Field	Welfare
Common stake / illusio	The legitimacy of the project (to avoid or prevent inequalities resulting from the CpSQ project)
Types of capital most valued	Political capital; statist capital; economic capital; symbolic capital
Participants	Quebec Government; Opposition Party; CAI; CDPDJ; PC; CNQ; AAPI; AGIDD-SMQ; CPM; OC; ADQ; COOID; FMSQ; AOQ; FMRQ; Dr. Tremblay; Dr. Bessette; Mr. Marinier; Mrs. Mino; Mrs. Farmer
Habitus	Deferred to the Latourian analysis chapter
Symbolic violence	To deviate the issue so that greater administrative control ends up being misrecognized for better care

Table 10 – Recapitulative Table for the Welfare Field

About Analyzing the Corpus Later On[rē-'flek-'si-və-tē] 4

At one point during the project, I started to feel a shift in my opinion. I was beginning to see that the project was not all good, far from it. The best example of that is what happened during an later pass on the corpus. You see, I had decided to read the same printed copy, already annotated with my first impressions. To my surprise, my feelings had changed radically. I was now siding most of the time with the people against the project and was really thinking the elected officials were violent in the comments they were providing after each testimony. This was not better as I did not want to be biased against technology either, but it showed me that it was possible to adopt a middle stance, where I would be as neutral as possible, acknowledging the problems of both sides in the matter.

Interestingly, this is also when I started to feel a shift as well among certain of my colleagues. This is because the media was starting to talk more and more about the new version of the Quebec health information infrastructure, Quebec's Health Record, and it seemed to be in the same state of chaos as when the previous attempt was aborted. The same stakeholders were presenting the same argument. This is when I definitely realized that this

project was in need of a different theoretical lens if we wanted it to change one day.

Concerns from the IT / IS field

Third stop – Knowing too much or not enough

IT was decided to compound the terms information technology (IT) and information systems (IS) here in order to bring together specific concerns about smart cards, databases, public key infrastructures, computers and the like – usually considered as information technologies – as much as concerns about work processes, data architecture, project management and the like – usually considered as information systems properties. The third stop in our journey will therefore look at the IT/IS field, once again through the words of the participants to that the feel of the situation is better grasped.

The Panorama

What is striking in this project is the lack of coherence within the official discourse with regard to information systems and information technologies. In fact, no formal description of the technology or of the new work process resulting from the envisioned system was ever presented by the government and yet the pre-bill was entitled "Act respecting Quebec health smart card"[88], which was definitely an information technology. A good representation of this situation is offered by Dr.

[88] Loi sur la carte santé du Québec

Lamontagne, a spokesperson for the Collège des Médecins du Québec (CMQ - Quebec College of Physicians):

> Mr. Lamontagne (Yves): (...) And, to be honest, even our members who are well versed in health systems, I must admit that we sometimes had to be very imaginative in order to visualize how health care will be provided in practice to the patients presenting a smart card; what will be its impact upon work organization, how will it be concretely implemented and, most of all, how will this new technology be integrated with the other technological solutions already deployed throughout the province in some community and health institutions[89]. (Quebec Hansard, February 19 2002)

The access profile was something crucial in the pre-bill. My own understanding of this concept was that the type of professional owning the card would be inscribed on the authorization card and the several professions would then be regrouped into distinct profiles which would allow different types of access (i.e., different part of the summary in either read or write) to be granted to different profiles. During the public consultation, everyone seemed to understand the concept differently and the following exchanges provide good examples of such confusion. The first one occurred between an MNA from the opposition and Dr. Provost, a neurosurgeon responsible for the professional affairs for the FMSQ:

> Mr. Fournier: My understanding was that the summary would be accessible to different categories. That different part of the summary would be accessible to different categories of professionals.

[89] M. Lamontagne (Yves) : (...) Et, pour être honnêtes, nous qui sommes finalement des initiés du système de soins, je dois vous avouer que nous avons dû par moments être très imaginatifs pour visualiser comment s'effectuera pratiquement la prestation des soins auprès des patients munis d'une carte à puce, quel sera l'impact sur l'organisation du travail, de quelle façon concrète s'effectuera son implantation et surtout comment s'arrimera cette nouvelle technologie de pointe aux autres solutions technologiques qui sont déjà déployées à travers le Québec dans certains milieux hospitaliers ou communautaires.

> Mr. Provost (Jacques): Well, no. Otherwise it will... Concretely, practically, in everyday life within hospitals, it would be unbearable[90]. (Quebec Hansard, February 26 2002)

Or this one between Dr. Boisvert, the person responsible for the clinical-administrative affairs at the Association des hôpitaux du Québec (AHQ – Quebec Hospital Association), and the opposition MNA:

> Mr. Boisvert (Laurent): Well. Let us look at the usual point of entry, which means the emergency ward. The patient arrives at the ER, the triage nurse for instance use the patient card and her own access card. Because we did not really talk about the access profiles, we will give her a relatively large access: medication appears on the screen, as well as some demographics and confirmed allergies. We can anticipate that at this moment, she could produce for instance a triage sheet containing all the information just mentioned. The patient then sees the doctor; the medication is already inscribed, so are the allergies, etc. The episode of care takes place. The patient is either dismissed or admitted. If admitted, this sheet with this information will be transcribed within the patient record and the episode of care will continue until the patient leaves the hospital.
>
> (...)
>
> Mr. Fournier : By definition, the nurse already – that is what you said – with her access profile large enough yet not as large as the physician's, she already withdrew the information from the system. There I realized it was a print that was made, maybe I am wrong. The doctor takes the record, there is a sheet explaining what the medical and pharmaceutical profiles are for this patient... But she soon realizes that she needs further information the nurse could not access to. She enters her access card and fetches this additional information. I imagine the same technology more or less, so another print is made, maybe this is only a small part added, an appendix, I guess it would work like that. Then the patient is admitted. Now in a different ward on a different floor, the record can be consulted

[90] M. Fournier: J'ai compris que le résumé serait accessible à différentes catégories. Il y avait différentes parties du résumé qui seraient accessibles à différentes catégories de professionnels, là.
M. Provost (Jacques): Bien, non. Sinon, ça se... concrètement, pratiquement, dans la vie quotidienne dans les hôpitaux, ça ne sera pas vivable.

> by different workers of the institution: nurses, doctors, orderlies perhaps? So I understand that the access profiles are not useful considering that the nurse or the doctor will have printed the health summary and verse it to the hospital record. Then the orderly who either has a different access profile or no profile at all will be able to look at the record including the printed health summary[91]. (Quebec Hansard, March 19 2002)

The example presented above relates to the work organization within a hospital yet things do not seem to be clearer for doctors working in clinics even though the questions were not always raised upon access profiles and concerned the health summary more generally. The following quotes provide an illustration of this. In the first one, the FMOQ voices its concern about the duplication of clerical work caused by the health summary:

> What is more, the health summary does not replace the patient record, whether in a public institution or in a private clinic. We are therefore talking about additional information to the ones already filed in different

[91] M. Boisvert (Laurent): Bon. On va prendre l'entrée usuelle, c'est-à-dire l'urgence. Le patient se présente à l'urgence, l'infirmière au triage par exemple utilise la carte santé du patient, sa carte d'habilitation. Comme on n'a pas parlé des profils d'accès, on va lui donner un profil d'accès relativement large: la médication apparaît, les données démographiques, l'allergie. On peut prévoir qu'à ce moment-là elle peut produire par exemple une feuille de triage où tous ces renseignements-là sont déjà tous inscrits. Le patient est donc vu par le médecin à ce moment-là, la médication est déjà inscrite, l'allergie, etc. Donc, l'épisode de soins se déroule. Le patient a congé ou est admis. S'il est admis, il est admis, et cette feuille-là, ces renseignements-là sont inscrits au dossier du patient et le patient continue son épisode de soins jusqu'au congé.
M. Fournier: Par définition, là, l'infirmière a déjà – C'est ce que vous nous avez dit – Avec son profil d'accès assez large mais pas aussi large qu'un médecin, fait sortir les informations. Là, j'ai vu que c'était un «print» qui était sorti, là, je peux me tromper. Le médecin prend le dossier, il y a une feuille qui explique, bon, c'est quoi, le profil médical pharmacologique, ta, ta, ta, mais il voit là-dedans qu'il aurait besoin d'aller chercher les autres informations auxquelles l'infirmière n'avait pas accès. Il sort sa carte d'habilitation, va chercher cette information. J'imagine, même technologie à peu près, là, il y a un «print» qui sort de la même façon, quitte à ce que ce soit l'ajout, là, l'annexe ou un petit bout de plus qui vienne s'ajouter, c'est à peu près comme ça que ça fonctionne. Et le patient est admis. Il monte à l'étage, et, à l'étage, le dossier peut donc être vu par les gens de l'établissement: l'infirmière, le médecin, un préposé peut-être? Donc, je comprends bien que le profil d'accès est plus ou moins utile dans la mesure où l'infirmière et le médecin ont sorti un «print» de l'ensemble du résumé, il est dans le dossier, puis le préposé aux soins qui, lui, n'a pas accès au profil, n'a pas le même profil ou pas du tout de profil, lui, il va voir le dossier, le résumé de santé va être dans la fiche d'hôpital.

> clinical records. (...) How can we reconcile the time spent to enter clinical data with an already busy schedule[92]? (FMOQ 2002, p. 5)

Now here is what the health minister had to say after the presentation of the FMOQ at the commission:

> Mr. Legault : Yes. Well, I think that, concerning work organization, it still has to be defined. But I think that eventually we should aim at having the information transcribed only once, thus we should be able to complete the internal record and the health summary at the same time[93]. (Quebec Hansard, March 19 2002)

Note here that this statement is completely in opposition with what the project proposes. Reorganizing work that way would require an information system totally different from the one put forward in the pre-bill as it would necessitate all legal records to be maintained electronically by every health provider. The misunderstandings transcend the work within hospitals and medical clinics, as the following excerpt from the OPQ representative shows:

> Mr. Fernet (Paul): (...) For instance, the number of patients who do not personally go to the pharmacy is high, and the patients who take the most medication are usually the less mobile. How will the card be updated for this type of clientele[94]? (Quebec Hansard, February 26 2002)

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[92] De plus, le résumé de santé ne vient pas remplacer le dossier-patient, que ce soit dans un établissement de soins ou dans les cabinets médicaux. Il s'agit donc d'informations supplémentaires à celles qui sont déjà contenues dans les différents dossiers cliniques. (...) Comment concilier le temps requis pour entrer les données cliniques avec un emploi du temps déjà surchargé ?

[93] M. Legault: Oui. Bon, je pense que, concernant l'organisation du travail, ça reste à être défini. Mais je pense qu'éventuellement il faudrait viser à ce que l'information ne soit pas retranscrite deux fois, donc qu'on soit capable à la fois de compléter le document interne et le résumé.

[94] M. Fernet (Paul) : (...) Par exemple, le nombre de patients ne se présentant pas personnellement en pharmacie est élevé, d'autant plus que les patients consommant le plus de médicaments sont habituellement les moins mobiles. Comment s'effectuera la mise à jour de la carte pour les clientèles non ambulatoires?

Considering that last quote, one could think that the patient card is necessary for the professional to gain access to the health summary. Yet even that notion is unclear for some, as shown in the following extract from Mrs. Michaud, a spokesperson for Option Consommateurs, an organization introduced in the previous chapter.

> Mrs. Michaud (Nathalie): (...) To this effect, we should mention some elements of the pre-bill that are far from being clear. First, would the presence of an individual with a health card be necessary for the professional to consult or modify the record? The answers seems to be no and the contrary would rapidly become unmanageable[95]. (Quebec Hansard, March 21 2002)

While Mr. Fernet seemed to think that the individual had to be present for the summary to be consulted or modified, Mrs. Michaud seemed to have read it differently. To summarize the situation at this point, in light of the quotes presented so far, hospital administrators, doctors, pharmacists and consumers had no clue as to how, in practice, the system was going to be implemented.

Another concern voiced within the IT/IS field was to the effect that the needs of the different stakeholders were never thoroughly appraised by the government. This is known fact because Pierrot Péladeau asked to consult the report of this evaluation (via the Act representing access to information) and was told that such a document did not exist. It is difficult to know whether the evaluation of alternative technologies was made or not. Maybe it was, and then it would probably be contained within the *Conception administrative et technique 4.1* a second document Pierrot Péladeau was

[95] Mme Michaud (Nathalie) : (...) Signalons à cet égard quelques éléments de l'avant-projet qui ne paraissent pas très clairs. D'abord, la présence d'une personne portant sa carte santé serait-elle nécessaire pour que l'intervenant consulte ou modifie son dossier? Il semble bien que non et cela deviendrait d'ailleurs vite ingérable.

denied access to, but this is something we may never know for certain. All in all, the lack of alternatives was a concern that came up in several declarations. From Mrs. Chabot, vice-president of the Centrale des Syndicats du Québec (CSQ – Quebec Group of Affiliated Trade Unions):

> Mrs. Chabot (Louise): (...) There is no theoretical rationale whatsoever in this pre-bill, or no reported analyses to support the choice of this technology in particular, which is a smart card. The pre-bill does not allow for a thorough understanding of the stakes and the functions. It elaborates upon the means, but usually, means serve ends. And what is striking here is to see how the functions or the ends of this project are far from being clear and far from being reassuring for the citizens and the professionals concerned with it. We are rather facing a technological blank cheque for administrative needs that are not even declared.[96] (Quebec Hansard, April 9 2002)

Or from Mrs. Filion, a communication assistant for the COPHAN:

> Mrs. Filion (Nicole): (...) Then we learned that there would possibly exist other ways to function that were never really submitted by RAMQ. And we would have liked to have them, because we do not necessarily have the resources to draw a portrait of all the possible models, only the RAMQ model was submitted to us, we would have liked to have other models, and we would have liked to have them tested, we would have like to talk about our needs and also about the needs of the medical workers[97]. (Quebec Hansard, March 14 2002)

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[96] Mme Chabot (Louise) : (...) Il n'y a aucun rationnel théorique dans cet avant-projet de loi ou aucun document d'analyse qui n'appuie le choix de cette technologie en particulier, qui est une carte à puce à microprocesseur. L'avant-projet de loi ne permet pas non plus une appropriation des enjeux et des finalités. On se penche beaucoup sur un moyen, mais, d'habitude, le moyen sert les fins. Et là ce qui est assez étonnant, c'est de voir justement que les finalités ou les fins d'un tel projet sont loin d'être claires et loin d'être sécurisantes pour l'ensemble des citoyens et des professionnels à qui il s'adresse. On parle plutôt d'un chèque en blanc technologique pour des besoins administratifs qui sont même non déclarés.

[97] Mme Filion (Nicole) : (...) Alors, là, on a appris qu'il y avait comme d'autres façons de fonctionner qui ne nous ont pas vraiment été soumises par la RAMQ. On aurait peut-être souhaité avoir - parce que, nous, on n'a pas nécessairement les ressources pour faire le portrait de l'ensemble des modèles possibles, on ne nous soumet que le modèle de la RAMQ - on aurait aimé pouvoir avoir d'autres

Amongst the professionals, two types of needs were depicted through the vision of two different systems: the health summary for emergency doctors, and especially Dr. Bessette, and complete electronic (interoperable or not) medical records, for most others. Whereas some groups or individuals, really disappointed by the fact the card would only grant access to a health summary, completely positioned themselves against the project, others adopted a more moderated attitude. The first point of view is represented by Mr. Audet, president of the Quebec Chamber of Commerce:

> Mr. Audet (Michel): (...) We must introduce methods to grasp more effectively and more rapidly the profile of a patient coming into a hospital or a private clinic, based upon the availability of reliable, precise and complete clinical information. In order to do so a summary is not sufficient, we must look further, have a bigger portrait, based upon an integrated system. (...) Our proposal supposes of course the digitalization of all the patient records in hospitals as well as the networking of these records enabling the health professionals to act with accurate knowledge about the patient condition and of the treatments he received before. The objectives aimed at, in terms of improving health care quality and performance would be more easily reached[98]. (Quebec Hansard, March 19 2002)

The more moderate alternative put forward by Dr. Boisvert from the AHQ, is very well summarized by an MNA from the opposition in the following excerpt:

> Mr. Fournier: (...) If I understand correctly, you agree with the pre-bill because you think that it will allow the network to be built, even if the

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modèles, on aurait aimé qu'ils soient expérimentés, on aurait aimé pouvoir dire c'est quoi nos besoins à nous et quels sont les besoins aussi du personnel médical.

[98] M. Audet (Michel) : (...) Il faut en effet instaurer des méthodes pour mieux saisir et plus rapidement le profil du patient qui se présente dans un établissement ou une clinique privée en disposant d'une information clinique fiable, précise et complète. Pour ce faire, un résumé n'est pas suffisant; il faut voir plus loin et plus large, sur la base d'un système intégré. (...) Notre proposition suppose évidemment une numéralisation (sic) de tous les dossiers patients des établissements et une mise en réseau de ces dossiers pour habiliter les professionnels de la santé à agir avec une réelle connaissance de l'état du patient et des soins reçus antérieurement. Les objectifs poursuivis en matière de qualité de soins et de meilleure performance auraient ainsi de meilleures chances d'être atteints.

> project does not plan to communicate anything other than the health summary. And you, you are saying: It does not matter, necessity knows no law and at one point or another, the government will see that there are other advantages than diffusing and accessing the RAMQ centralized database. This is what you are telling us[99]. (Quebec Hansard, March 19 2002)

Whereas the examples presented so far mainly concern the processes, i.e., how work organization would be modified by the arrival of a health smart card with a health summary, the technologies were also the object of controversy in this field. The best example of technology concerns came from the presentation of Mr. Claude Sicotte, a professor in health administration who was appointed by the RAMQ to assess the second pilot project that went on in Laval. Professor Sicotte's appraisal was not as positive as the government would have wanted him to be and one of his pet peeves was that the proposed solution did not use the full potential of the smart card technology, that the system was not even implemented that it was technically obsolete.

In sum, what was suggested by Professor Sicotte was to use the smart card as a key that would grant access to the complete set of medical records dispersed amongst health organizations and available through the secure network already available to them (RTSS). On that topic, he wrote:

> The concept introduced with the pre-bill is obsolete. It does not allow for the full technological potential of the smart card to be exploited. The pre-

[99] M. Fournier : (...) Si je comprends bien, vous êtes d'accord avec l'avant-projet de loi parce que ça va vous permettre d'être mis en réseau même si l'avant-projet de loi n'envisage pas de communiquer dans le réseau, communiquer autre chose que le résumé de renseignements de santé. Et, vous, vous dites: Peu importe, nécessité fera loi et, à un moment donné, un gouvernement verra bien qu'il y a d'autres avantages que de simplement diffuser ou accéder à un résumé centralisé à la RAMQ. C'est un peu ça que vous nous dites.

> bill ignores two important phenomena that further the utility of a smart card within the health care sector. These two phenomena are the availability of a great amount of electronic clinical data and the existence of Internet technologies that can create secure telecommunication networks allowing information to be shared between all the public institutions (hospitals, CLSC, ...) and private establishments (clinics, pharmacies)[100]. (Sicotte 2002b, p. 3)

And later he added:

> In this environment, we will take advantage of two characteristics of the smart card will: its memory and communication ability. Part of the information can be inscribed on the card itself while the balance is accessed through pointers indicating the several data sources where useful information about a patient condition can be retrieved. The ability to act as a pointer is a new and particularly interesting function of the smart card. Just like a search engine is used on Internet to locate information, a smart card can, from its pointers or in searching for a unique patient number on a network, enumerate all the available data sources (hospital records, pharmaceutical profile in pharmacies, laboratory and other exam results...) and facilitate the access to these data. What is more, because of its built-in properties (encryption, selective access, electronic signature), the card allow for a rigorous control of the access to the data in enforcing the desired procedures in terms of security, confidentiality and patient consent.
>
> Used that way, the smart card becomes a mean that allow a distant, rapid and secure access to the data contained in the traditional medical record. The smart card in itself is not the patient medical record. It is however the technical mean by which the record is built and accessible[101]. (Sicotte 2002b, p. 4)

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[100] Le concept proposé par le projet de loi est désuet. Il ne permet pas d'exploiter le plein potentiel technologique d'un système de carte à microprocesseur. En cette matière, le projet de loi ignore deux phénomènes importants qui ont redessiné l'utilité d'une carte à microprocesseur au sein d'un système de santé. Ces deux phénomènes sont la disponibilité importante de données cliniques électroniques et l'existence des technologies Internet apte à créer un réseau de télécommunications sécurisées permettant un échange d'informations entre tous les points de services offrant des soins de santé incluant les établissements publics (hôpital, CLSC,...) et les établissements privés (clinique médicale, pharmacie).

[101] Dans cet environnement, deux caractéristiques de la carte à microprocesseur sont alors être mises à profit: sa capacité mémoire et sa capacité communicationnelle. Une partie de l'information peut être

Of course, this solution has its detractors. For instance in the following quote, Dr. Bessette, an emergency doctor, offered several reasons why this solution should not be adopted:

> Mr. Bessette (Luc): The unavailability before several years of a digital information system accessible throughout the health network makes it impossible to create at this point all the pointers necessary to create a complete virtual record from the different electronic records of a patient. Put differently, the virtual interoperable record, as recommended by Professor Sicotte, is probably interesting but, in reality, is impossible to realize because the information that should be pointed to are still not digitized.
>
> The third reason is the fact that an intelligent expert system able to summarize disparate information scattered upon hundreds of pointers in order to establish an accurate portrait of a patient's medical history in less than two to three minutes does not exist[102]. (Quebec Hansard, February 26 2002)

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contenue sur la carte elle-même alors que la plus grande partie est rendue accessible grâce à des pointeurs qui indiquent les diverses sources de données où des informations utiles sur la condition d'un patient peuvent être trouvées. La capacité d'agir comme pointeur est une fonction novatrice, particulièrement intéressante de la carte à microprocesseur. Un peu comme un logiciel fureteur utilisé sur l'Internet pour repérer les informations recherchées, une carte à microprocesseur peut, grâce à des pointeurs qu'elle détient ou en recherchant le numéro de dossier unique d'un patient sur un réseau de systèmes d'information, énumérer toutes les sources de données disponibles (dossier hospitalier, profil pharmacologique en pharmacie, résultats de laboratoires et d'examens,..) et faciliter l'accès à ces données. De surcroît, grâce à ses capacités informatisées (encryptage, accès sélectif, signature électronique), la carte permet de contrôler rigoureusement l'accès aux dites données en mettant en vigueur les procédures désirées en matière de sécurité, de confidentialité et de consentement du patient. Selon cet usage, la carte à microprocesseur devient un moyen qui rend accessible à distance, rapidement et sécuritairement les données contenues dans le dossier médical traditionnel. La carte santé en elle-même n'est pas le dossier médical du patient. Elle est par contre le moyen technique par lequel ce dossier est constitué et accessible.

[102] M. Bessette (Luc) : La non-disponibilité avant plusieurs années de systèmes d'information numérisée accessibles à l'échelle de l'ensemble du réseau, cela fait en sorte qu'il est impossible de créer dès maintenant tous les pointeurs nécessaires à la création d'un dossier virtuel complet à partir des différents dossiers électroniques locaux d'un même patient. Autrement dit, le dossier virtuel partageable, tel que recommandé par le professeur Sicotte, est probablement intéressant, mais, dans les faits, il est impossible à réaliser présentement parce que les informations vers lesquelles on devrait pointer ne sont tout simplement pas encore numérisées.
Troisièmement, l'inexistence d'un système expert intelligent apte à sommariser de l'information disparate distribuée sur des centaines de pointeurs pour établir un portrait fidèle de l'histoire médicale d'un individu et dont le temps de consultation est moins de deux à trois minutes.

A second technological issue in the debate related to security and questioned whether to centralize or not the clinical data. On the one hand, the CAI considered it would be better to offer local solutions compatible on a provincial level and subsequently build interregional communication bridges to deal with the exceptions, as the following excerpt illustrates:

> Centralizing information can seem to be an interesting solution economically and in terms of providing access to a greater number of individuals. But the laws concerning personal information protection all lay the same wager: compartmentalizing information within several organizations will always be the best way to guarantee confidentiality and the most appropriate obstacle to prevent the State from profiling individuals and interfere in their private life[103]. (CAI 2002)

The notion of compartmentalization is supported by many other participants, amongst which the ARC – FACEF, as shown as follows:

> Mrs. Latreille (Mireille): Generally, in terms of protecting personal information, compartmentalizing data is considered to be a lot more secure. Currently, personal information about citizens' health is relatively well protected because they are scattered in several institutions. There is no doubt that decompartmentalization will considerably increase the risk of confidentiality being broken. Let us not forget the experience of the last years that showed how some people would lust over the big databases that were created. The risk that insurers and employers get a hold of these data does exist and, even though the pre-bill formally forbid this. Unfortunately, no legal rule and no security mechanism can build an

[103] La centralisation de l'information peut certes sembler une solution intéressante du point de vue économique et au niveau de l'accès à l'information par un plus grand nombre de personnes. Mais les lois de protection des renseignements personnels font toutes le même pari: le cloisonnement de l'information au sein de plusieurs organismes demeurera toujours la meilleure garantie de confidentialité et l'obstacle le plus approprié pour éviter que l'État ne puisse dresser des profils sur les individus ou autrement s'immiscer dans leur vie privée.

> unfailing guarantee against illegitimate uses[104]. (Quebec Hansard, March 7 2002)

On the other hand, the government firmly disagrees with the idea, presenting instead these counterarguments:

> Mr. Bertrand : (...) We are being told that the potential – it is only an illustration here – for attacks, hacking, inappropriate usage, information war context, all of this require security controls that are more effective in a system that is more centralized[105]. (Quebec Hansard, March 27 2002)

> Mr. Legault : (...) You can well imagine that, if we have to secure data dispersed within 10 000 institutions, it is a lot more expensive than to secure it in a single place, at the Quebec Insurance Board[106]. (Quebec Hansard, March 19 2002)

We can assume from these quotes that both the CAI and the government are highly preoccupied with the security of clinical information yet according to Dr. Bessette and Mr. Sicotte, it is not that clear. The following quotation from Dr. Bessette illustrates this, first in relation to the CAI:

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[104] Mme Latreille (Mireille) : Généralement, en matière de protection des renseignements personnels, le cloisonnement des données est considéré comme beaucoup plus sécuritaire. Actuellement, les renseignements personnels sur la santé des citoyens sont relativement protégés par leur dispersion dans plusieurs établissements. Il ne fait aucun doute que leur décloisonnement augmentera considérablement les risques de bris de confidentialité. Rappelons-nous l'expérience des dernières années qui a montré à quel point la création de grandes banques de données suscite la convoitise. Les risques que des assureurs ou des employeurs aient accès à ces informations existent bel et bien, même si des interdictions formelles sont prévues à cet effet à l'avant-projet de loi. Malheureusement, aucune règle juridique ni aucun mécanisme de sécurité constituent une garantie à toute épreuve pour prévenir les usages illégitimes.

[105] M. Bertrand : (...) [O]n nous dit que le potentiel – à titre d'illustration seulement, là – d'attaque ou de piratage informatique, d'utilisation inappropriée, contexte de guerre d'informations, tout ça requiert des contrôles de sécurité plus performants dans un système davantage centralisé.

[106] M. Legault : (...) Vous pouvez bien vous imaginer que, s'il faut sécuriser les données qui sont dans 10 000 établissements, ça coûte beaucoup plus cher que de les sécuriser dans un lieu, là, à la Régie de l'assurance maladie du Québec.

> Mr. Bessette (Luc): But at the same time, the paper record of the same patient, filed in one of the three CHUM buildings, still has to be brought by taxi or messenger to another CHUM building, if needed for consultation, because there exists no other communication mean. And this is done without logs, meaning that no one knows exactly who sees what and when.
>
> These records contain personal information and should therefore fall under the responsibility of the Access to Information Commission [CAI] who administers the Act respecting Access to documents held by public bodies and the Protection of personal information. Consequently, it is extremely curious to see the zeal put by the CAI in wanting to control the communication of the health summaries when it seems totally disinterested to suggest concrete solutions that would secure personal information kept in records that are a lot more detailed and explicit[107]. (Quebec Hansard, February 26 2002)

And next more generally to all those opposing the project because of security or confidentiality fears:

> Mr. Bessette (Luc): What is really paradoxical is that medical records, in hospitals notably, will only be fully secure and confidential the day liability measures will have been developed and introduced. And this is exactly what access logs would allow[108]. (Quebec Hansard, February 26 2002)
>
> Mr. Bessette (Luc): In banks, if it were so easy this type of things, well, there would be electronic banks robbed by the dozen, we could get information. It is so much easier, when we want to obtain information

[107] M. Bessette (Luc) : Or, au même moment, faute d'autres moyens de communication, le dossier papier plus complet du même patient, constitué dans un des trois pavillons du CHUM, est encore acheminé par taxi ou messager à un autre pavillon du CHUM, s'il y est requis pour consultation. Et cela, sans journalisation, c'est-à-dire sans que quiconque sache qui voit quoi ni quand il le voit.
Ces dossiers contiennent des renseignements personnels et devraient donc tomber sous la coupe de la Commission d'accès à l'information qui administre la Loi sur l'accès aux documents des organismes publics et sur la protection des renseignements personnels. Aussi, il m'apparaît extrêmement curieux de voir le zèle avec lequel la CAI veut enrégimenter la communication de résumés de renseignements médicaux, alors qu'elle semble se désintéresser à amener des solutions concrètes à la sécurisation de renseignements personnels de dossiers autrement plus détaillés et explicites.

[108] M. Bessette (Luc) : Ce qu'il y a de plus paradoxal, c'est que la sécurité et la confidentialité des dossiers médicaux, hospitaliers notamment, ne pourront être assurées que le jour où on aura développé et instauré des mesures d'imputabilité telles que le permettrait la journalisation des accès.

> about someone, to bribe the care provider than to eventually get the information in databases that will be secured anyway. And usually – let us be honest – the problem you faced, at the Revenue Ministry or at the Quebec Automobile Insurance Society, it is not that people were able to access from a distance, from outside the network, it is that people inside the network were bribed and sold information. That is by far what is most likely to happen. To avoid this, what should we do? Create liabilities.[109] (Quebec Hansard, February 26 2002)

Mr. Sicotte disputes the centralization idea on a similar basis:

> Mr. Sicotte (Claude): (...) To this effect, I would like to make the commission sensitive to the fact that the idea to store clinical data on a central file represents an important flaw in terms of data security and confidentiality. In fact, the health summary, despite the strict security measures that surrounds it, does not resolve the security and confidentiality problems insofar as the data at its basis are simply retranscribed while still kept on the original information system. The summary label well indicates that we summarize information that is kept elsewhere in the system. This concept of a secure health summary is similar to the strategy of the ostrich burying its head in the sand in order to hide. No matter how much we try to put the summary in a safe, the essential is kept in full view of everybody[110]. (Quebec Hansard, March 7 2002)

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[109] M. Bessette (Luc) : Dans les banques, si c'était si facile, ce genre de chose là, bien, il y aurait du vol de banques électroniques à tour de bras, on pourrait aller chercher des informations. C'est tellement plus facile, si on veut avoir des renseignements sur quelqu'un, de soudoyer la personne qui lui donne des soins qu'éventuellement d'aller chercher des informations dans des banques de données qui seront sécurisées de toute façon. Et, habituellement – soyons bien honnêtes – la problématique que vous avez eue, au ministère du Revenu ou à la Société de l'assurance automobile du Québec, ce n'est pas des gens qui ont eu accès à distance, de l'extérieur du réseau, c'étaient des gens qui étaient dans le réseau qui ont été soudoyés puis qui ont vendu des informations. C'est ce qui est, de loin, le plus probable. Pour éviter ça, qu'est-ce qu'on fait? On crée de l'imputabilité.

[110] M. Sicotte (Claude) : (...) À cet effet, je veux sensibiliser la commission au fait que le concept d'entreposer des données cliniques sur un fichier central présente une faille importante au plan de la sécurité et de la confidentialité des données. En effet, le résumé de renseignements de santé, malgré les mesures de sécurisation strictes dont il fait l'objet, ne résout nullement les problèmes de sécurité et de confidentialité dans la mesure où les données servant à alimenter ce résumé sont simplement recopiées et demeurent sur les systèmes d'information source. L'appellation de résumé indique bien qu'on résume des données qui restent ailleurs dans le système. Ce concept d'un résumé de données sécurisées s'apparente à la stratégie de l'autruche qui se met la tête dans le sable pour se cacher. On aura beau mettre un résumé de données dans un coffre-fort, l'essentiel demeure à la vue de tous.

A third technology issue dealt with in the public consultation process was cryptography, mainly public key infrastructure. According to Communications Security Establishment Canada (CSEC), Canada's national cryptologic agency, a public key infrastructure (PKI) "is a Cryptographic key and Certificate delivery system which makes possible secure financial electronic transactions and exchanges of sensitive information between relative strangers." (http://www.cse-cst.gc.ca/services/pki/what-is-pki-e.html, last consulted August 8, 2008). As such, the infrastructure is responsible for managing and distributing the public/private key pairs and publishing the certificates in open bulletin boards. Within the smart card project, certificates would be emitted by the PKI to all the professionals based on a strict identity verification process. This would then give legal value to their digital signatures.

According to François Marinier, one of the rare citizens who participated to the public consultation, PKI should not only be used within the professional access cards but within the patients' health cards as well, as he considers this the only way to fully secure records:

> Mr. Marinier (François): Second recommendation, concerning information security, I firmly believe the summaries should be encrypted with keys from the PKI, from the governmental public key infrastructure. For me, it is the only way to guarantee, that the government can guarantee that the summaries will be kept confidential throughout their whole life cycle. I showed in my brief that there is a certain proliferation of information, of digital data in systems, and it can be very difficult to apply constant security measures in a distributed context. Therefore, in applying security, in maintaining security at the basis, to the summaries, that way risks are reduced considerably. Once the summary is encrypted, it can

> progress through different processes and systems while remaining totally confidential[111]. (Quebec Hansard, April 9 2002)

Still, the apparent robustness of the public-key infrastructure was contested by Mr. Stefan Brands, an expert in cryptography and an adjunct professor at McGill University's School of Computer Science. Mr. Brands was also the founder of Credentica, a Montreal-based start-up specialized in identity and access management solutions sold to Microsoft in March of 2008. According to him, PKI certificates lack in power and flexibility and he offered an alternative, as shown below:

> Secret-key certificates are a great technological improvement compared to traditional public-key certificates, while preserving all the benefits of the latter. Contrary to public-key certificates, secret-key certificates allow the subject's attributes to be authenticated and validated, for instance, his access rights and other characteristics, without necessarily having to disclose an identifier. It is thus possible to provide only the information necessary to the finality of the transaction without necessarily having to reveal the participant's identity[112]. (Quebec Hansard, March 28 2002)

Finally, the smart card technology per se was contested by some individuals and groups, as depicted in the following quote from the representative of AAPI:

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[111] Deuxième recommandation, au niveau de la sécurité de l'information comme telle, je crois fermement qu'on doit chiffrer les résumés comme tels à l'aide de clés de l'ICPG, de l'infrastructure à clés publiques gouvernementale. D'après moi, c'est la seule façon vraiment d'être capable de garantir, que le gouvernement puisse garantir le maintien et la confidentialité des résumés tout au long de leur cycle de vie. J'ai démontré dans mon mémoire qu'il y a une certaine prolifération des renseignements, des données informatiques dans les systèmes, puis ça peut être très difficile à tenter d'appliquer des mesures de sécurité constantes dans un contexte distribué. Donc, en appliquant la sécurité, le maintien de la confidentialité à la source même aux résumés, à ce moment-là on réduit beaucoup les risques. Une fois que le résumé est chiffré, il peut faire son cheminement dans les différents processus, à travers les différents systèmes, en garantissant un maintien de la confidentialité.

[112] Les attestations électroniques constituent une amélioration technologique importante face au certificat numérique traditionnel, tout en préservant les bénéfices reconnus à ces derniers. Contrairement au certificat numérique, elles permettent de valider la justesse des attributs du sujet, par exemple, ses droits d'accès et autres caractéristiques, sans nécessairement divulguer un identifiant. Ainsi, il est possible de présenter uniquement l'information nécessaire à la finalité de la transaction sans systématiquement révéler l'identité du participant.

> Mrs. Desbiens (Lina): The smart card within the context of the Rimouski pilot project, where the individual was carrying his medical record on the card, the chip on the card made sense, because we wanted to carry a lot of information. The project changed but the technology did not[113]. (Quebec Hansard, Marc 14 2002)

This section aimed at showing how little coherence there were between the different pictures different groups held for the IT/IS at the basis of the pre-bill. Many major IT/IS points were the subject of incomprehension by one or more participants: the smart card, the encryption algorithm, the system architecture, the distribution of access privileges. Moreover, similar problems occurred with operational procedures as no one seemed to know how the technology would be used in real conditions.

Analyzing the Field

Capital Distribution

The IT/IS field is often viewed as a cultural field (such as the field of high education), since not only economic capital but also cultural capital and, mostly, symbolic capital, are at stake there. As such, just as the field of cultural production, the IT/IS field can be divided in two sub-fields; the small-scale restricted "technology for technology's sake" field where intellectuals' ideas prevail and the large-scale "business is business" field where economic gains are central.

[113] Mme Desbiens (Lina): La carte à microprocesseur dans le cadre du projet de Rimouski, du projet-pilote de Rimouski, où la personne transportait son dossier médical sur sa carte, le microprocesseur avait un sens. L'utilisation de cette technologie-là avait un sens, parce qu'on voulait transporter beaucoup d'information. Le projet a changé, mais on est demeuré avec la même technologie.

Figure 10 presents an overview of the IT/IS field. As in the previous chapters, the locations are approximate and in relation to the other participants and the Quebec Health Card project.

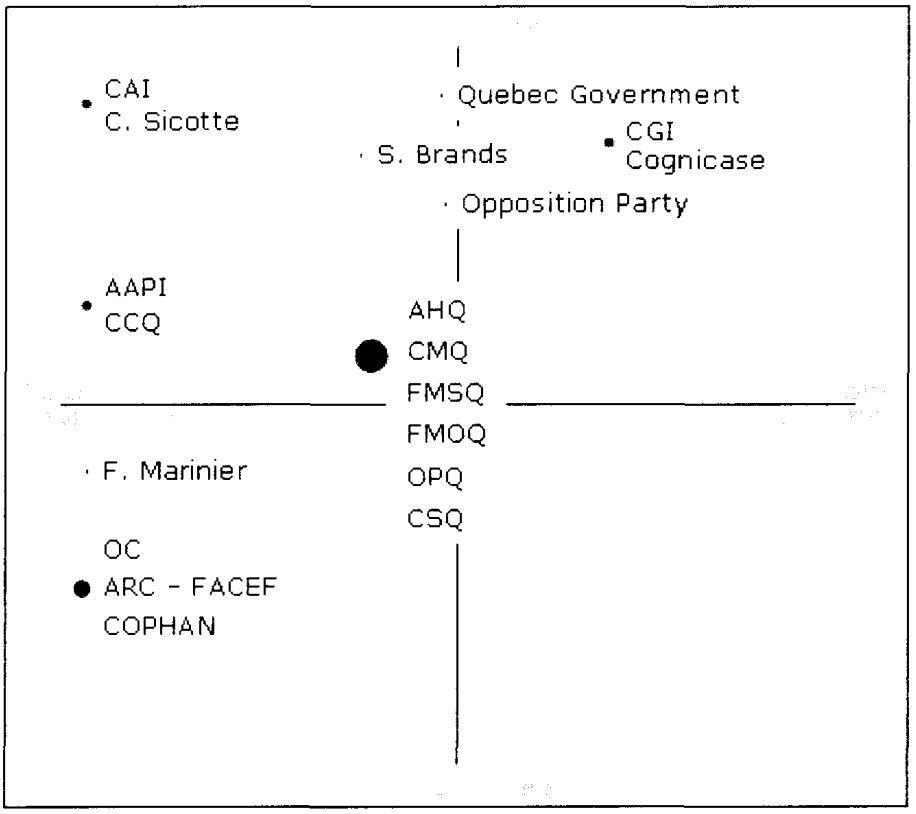

Figure 10 - The IT/IS field

The same logic as the one explained in length in the two previous chapters supports the positions of the participants in this field. The big difference in this figure is the presence of Mr. Brands, CGI and Cognicase. Mr. Brands is located in the upper middle section. He is positioned there considering that, on top of being a university professor having intellectual capital, he also owns a company specialized in encryption and security. His overall capital is therefore more balanced as he must go back and forth between the neutrality stance of a professor and the pecuniary interests

of a company CEO. CGI and Cognicase are located in the upper right corner considering that they both are commercial organizations trying most of all to make profit.

Symbolic Violence

Symbolic violence within the IT/IS field is manifested in two different ways. The first one refers to the constant references to the importance information systems have or should have in our life in 2002. This was a point made the minister in both his opening and closing speeches:

> Mr. Legault: Well, all this people must be able, in 2002, to exchange information efficiently. Although the smart card project submitted to this commission does not claim to bring a miracle solution to all the issues, I nevertheless believe that it carries with it changes that will benefit the citizens, men and women, working in the health sector[114]. (Quebec Hansard, February 19 2002)

> Mr. Legault: I inquired about what was said during the exchange periods, but I am still convinced of one thing, that is, first, this health card, we need it. We cannot in 2002, in an infrastructure managing $17.5 billions, with 10 000 service points, with 400 000 workers, say: We will carry on

[114] M. Legault: Donc, tout ce beau monde doit être capable, en 2002, de pouvoir s'échanger l'information de façon efficace. Et le projet de carte santé qui est soumis à l'étude de cette commission n'a pas la prétention d'apporter une solution miracle à tous les enjeux, mais cependant je pense qu'il est porteur de changements dont bénéficieront nos concitoyens et les hommes et les femmes aussi qui travaillent dans nos réseaux.

> receiving cardboard records and wander with cardboard records in cabs throughout Quebec, Mrs. Speaker[115]. (Quebec Hansard, April 9, 2002)

The most aggressive expression of this first type of symbolic violence was made towards the Quebec Medical Residents Federation, after their spokesperson had presented their brief to the Commission. In sum, the FMRQ maintained that they did not think the smart card was able to improve the health care system since it was too costly for the benefits expected, especially at a time where lacking medical equipment and qualified professionals were lacking, where waiting lists were ever growing, and where emergency wards were unable to cope with the flow of patients. From all these arguments, the minister seemed to have retained very little:

> Mr. Legault: Well, listen, first thank you, Mr. Delisle and therefore to all the Quebec Medical Residents Federation. I will tell you that your presentation really surprises me. I would have never thought that a group of young people – because that is what it is; there is at least Mr. Delisle who is young – would offer such a presentation, a presentation where you are coming to tell us... I am starting to be worried now. I am wondering: I think I will have a word with the Minister of Education. I am thinking: Do your courses teach you the importance of information systems in 2002? Because... Wait a minute, I will ask you a question, after a couple a comments. You will allow me... Because I cannot get over your position, especially coming from young people, young doctors who are our future, I cannot get over the idea that you can hold such a position in 2002[116]. (Quebec Hansard, February 26 2002)

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[115] M. Legault: Je me suis enquis de ce qui s'est passé pendant ces périodes d'échange, mais je demeure convaincu d'une chose, c'est que, d'abord, cette carte santé, on en a besoin. On ne peut pas en 2002, dans un réseau qui gère 17,5 milliards de dollars, qui a 10 000 points de vente, où il y a 400 000 personnes qui travaillent, dire: On va continuer à avoir des dossiers carton puis se promener avec des cartons dans des taxis au Québec, Mme la Présidente.

[116] M. Legault: Bon, écoutez, d'abord, merci, M. Delisle, et donc à toute la Fédération des médecins résidents du Québec. Je vais vous dire que je suis énormément surpris de votre présentation. Je n'aurais jamais pensé qu'un groupe de jeunes – parce que c'est ça; en tout cas, il y a au moins M. Delisle qui est un jeune, là – qui nous fasse une présentation comme celle-là, une présentation où vous venez nous dire... Là, je suis en train d'être inquiet. Je me demande, je me dis: Je pense que je vais aller parler au ministre de l'Éducation. Je me dis: Est-ce que dans vos cours vous savez l'importance des systèmes

The second way in which symbolic violence was manifested in that field was in referencing big consulting companies in order to close technological discussions, especially concerning security, as in the following quote:

> Mr. Legault: Yes. Maybe, but if we look more at the information security, the RAMQ and the Ministry consulted some specialists who know the subject a lot more than me, important societies such as Cognicase and CGI. And what we are being told is that, if we want to secure the information properly, it is better to have it all at the same place rather than keep the information in more than 10 000 service points[117]... (Quebec Hansard, April 9 2002)

At this point, no further reason was provided for this assertion about security, making this an *argumentum ad verecundiam* (the fallacy of appealing to the testimony of an authority outside his special field). This is so because the names dropped, i.e., the source (in this case CGI and Cognicase) may very well be credible but this does not necessarily make the claim valid. What is more, these societies may have been specialized in selling, building, implementing, and managing these types of centralised systems and as such, they may have been biased in their recommendations to the government.

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d'information en 2002? Parce que... Attendez une minute, je vais vous poser une question, là, après quelques commentaires. Vous allez me permettre, là... Parce que je n'en reviens pas de votre position, de la position surtout qui vient des jeunes, de jeunes médecins qui sont l'avenir, là, que vous pouvez tenir une position comme celle-là en 2002.

[117] M. Legault: Oui. Peut-être, si on revient davantage sur la sécurité de l'information, la RAMQ et le ministère ont consulté des spécialistes, là, qui connaissent ça beaucoup plus que moi, là, des compagnies importantes comme Cognicase ou comme CGI. Et ce qu'on nous a dit, c'est que, si on voulait assurer la sécurité de l'information, c'était préférable de l'avoir à un endroit plutôt que de laisser l'information dans les 10 000 points de services....

The following table represents the different notions of importance for a Bourdieuian analysis as well as their correspondences within the field of IT/IS. Once more, the notion of habitus is deferred to the next chapter.

Concepts	Example
Field	IT/IS
Common stake / illusio	The technological soundness of the system and its fit with the different work processes affected by the project
Types of capital most valued	Economic capital; Cultural capital; Symbolic capital
Participants	Quebec Government; Opposition Party; CGI; Cognicase; Pr. Sicotte; Pr. Brands; CAI; AAPI; CCQ; AHQ; CMQ; FMSQ; FMOQ; OPQ; CSQ; Mr. Marinier; OC; ARC-FACEF; COPHAN
Habitus	Deferred to the Latourian analysis chapter
Symbolic violence	IT/IS is a must have in 2002 *Argumentum ad verecundiam*

Table 11 – Recapitulative Table for the IT/IS field

Lost in Translations

Analyzing the situation with ANT

It is interesting to see from previous chapters that neither the doctors associations nor the patients associations necessarily leagued on one side of the debate. This goes against intuition yet, when examined closely, it makes sense. This chapter aims at better understanding this situation using one key concept and two different sets of tools offered by the actor-network-theory.

As suggested in the chapter's title, translation is a key concept in actor-network-theory, especially when contrasted with the more commonly known notion of diffusion. Within the diffusion model, the premise is that an innovation should be disseminated amongst society and that failure to do so is either caused by a problem with the technology (nature) or with the environment (society) (Rogers 1995). Nature and society are therefore taken as causes for the diffusion's failure or, to a lesser extent, for local adaptations of the technology. Within the translation model on the other hand, nature and society are the consequences of a settled controversy. This is because both nature's representation and society's stability were caused by the settlement of the controversy and as such, they cannot explain why the controversy was settled in the first place (Latour 1995). Humans from society and non-humans in nature are intimately associated in actor-networks and it is through translations that displacement occurs in order to form a (temporarily) stabilized innovation. In the

voluminous literature about actor-network-theory, the unfolding of translations is observed in many different ways. For the present thesis, two sets of tools were chosen to perform this task; they are introduced here.

The first set of tools was initially designed to write stronger (and thus also to analyze) scientific texts but it is very appropriate for analyzing any type of discourse where people aim to convince others. In order to achieve this, Latour introduces the principle of fortification where contenders try to go from a weak rhetoric to a strong rhetoric using three different tactics: stacking, staging/framing, and captation. Stacking is performed when stronger texts as well as figures and numbers are brought into the text (or discourse) to convince others. Staging/framing is achieved through references put in the text (discourse) about how to read (understand) it and, most of all, who should read (understand) it. Finally, captation is achieved when objectors' moves are foreseen and, controlled to the utmost, often through generalizing the phenomenon such that the readers (opponents) are enticed to move away from their comfort zone and accept things they were not ready to accept at first (Latour 1995).

The second set of tools was introduced in a previous chapter: individualizers. They are the different networks that a person joins, which ultimately make him into the individual that he is. Remember that within ANT, a human actor can either associate with other humans or non-human actors. Individualizers are in many ways equivalent to the digital world's plug-ins and applets.

Fortification Tactics

Stacking

Stacking was used in all three panoramas, as each actor-network based its arguments on a stronger piece of text (or a stronger entity) at one time or the other. For instance, in the political field, the participant who used stacking the most was Mrs. Prémont, who referred alternately to the rule of law principle, the Arpin Commission Report, the Clair Commission Report, two ministerial briefs submitted to the Cabinet, and the Health Insurance Act (R.S.Q. chapter A-29), all within eight paragraphs of her brief. The following section will summarize her discourse in order to see how these non-human actants participated in the present controversy and forced the innovation's translation. Mrs. Prémont asserted that the pre-bill was going against what she called the Rule of Law, which stipulates that any governmental decision should be made in total conformity with existing laws. This is so because the pre-bill was written following the ideas put forward in two ministerial briefs submitted to the Cabinet, which clearly stated that: "the proposition [was] driven by a will to pave the way for the *future evolution* of the health system and to *manage a new equilibrium between public and private actors.*"[118] (Prémont 2002, p. 5, emphasis in original) This in turn goes against the principle at the basis of the Health Insurance Act (R.S.Q. chapter A-29): the legal equality of every citizen in the face of illness and death (and thus the unique and identical coverage of every citizen within the health system). Furthermore, the decision to modulate the coverage seems to be a direct response to

[118] "[L]e moteur de la proposition est de paver la voie vers une *évolution future* du système de santé et de *gérer un nouvel équilibre entre les acteurs public et privés.*"

the Arpin Commission and Clair Commission reports. The Arpin committee was mandated to study the complementarity of the private sector with the fundamental objectives pursued by Quebec's public health system. Their report was submitted in 1999. The Clair Commission was a major commission instructed to thoroughly study health and social services in Quebec and to propose recommendations upon which the government would elaborate future health policies. Submitted in 2001, the report raised, once again, the idea of partnerships between private clinics and public hospitals, amongst other things.

Within the political field, stacking was also used by the government in its refusal to share certain documents with the participants. Their decision was supported by two texts: the *Fonctionnement du Conseil des ministres*[119] and the Act respecting Access to documents held by public bodies and the Protection of personal information (R.S.Q. chapter A-2.1). The *Cabinet's Operational Procedures* is a governmental publication that introduces the different documents that can be submitted to the Cabinet as well as their path through the Machinery of Government. This document lays down the formatting guidelines for briefs submitted to the Cabinet along with its related rules, including the fact that the document should consist of a public and a private section, and that the latter must not be made available to the public before the deadline set out in the Act respecting Access to documents held by public bodies and the Protection of personal information has expired.

[119] Cabinet's Operational Procedures. See Fonctionnement du Conseil des ministres. 2008. In *Ministère du Conseil Exécutif*, Retreived August 26, 2008, from Publications du Québec: http://www.mce.gouv.qc.ca/publications/fonctionnement.pdf.

One must remember that in the Quebec Health Card project, the confidential sections of the briefs were said to contain information about cost breakdown, which remained unobtainable, and that a great number of participants voiced their disapproval about this fact. Whenever a participant referred to the cost benefits analysis, the government would answer that the math had been done, but that the information was classified. I myself had access to the confidential sections of the two briefs. They were part of an overarching document that I was able to find by simply using the expression "carte santé Québec" when querying the search engine of the Quebec Government Libraries (CUBIQ). I was then allowed to borrow the documents (it came in two parts) through an interlibrary loan. To my surprise, it was composed of the two full briefs submitted to the Cabinet, including the confidential sections. My understanding of R.S.Q. chapter A-2.1 is that many more years should have passed before these documents were released. In any case, I was very disappointed to see how lean these sections actually were, as the second brief simply presented the same figures (costs) broken down according to the nature of the expenses (besides, the numbers were identical to the ones available in the public portion of the first brief). In addition, the briefs said very little about expected returns, and made no mention of the additional outlays required to equip private clinics in the health system. Nevertheless, I was also stunned to see in cold print, in a confidential section, that:

> [E]fficient and evolutionary means will be required, considering the predictable evolution of the health system, in order to manage a new

> equilibrium between the public and private actors that provide services and new remuneration methods[120] (R. Trudel 2001d, p. 18).

This supports the arguments of Mrs. Prémont, which were introduced earlier in this chapter, yet the government never acknowledged this during the public consultation.

Finally, the Act respecting Access to documents held by public bodies and the Protection of personal information also provided the government with a reason to deny Mr. Péladeau access to several other documents, in particular the (in)famous *Technical and Administrative Design 4.1*,[121] a purported document which apparently contained information about different data and process models, system types and network architectures, as well as the justifications for the choices that had been made.

Interestingly, the government used stacking in ways that impeded the project when they should rather have used this tactic to communicate their ideas in a more convincing manner. According to Latour (1995), using figures and numbers is one of the best ways to fortify a discourse and make it more credible. The mere absence of such an instrument in the CpSQ project worried many citizens who became suspicious of the whole plan and therefore chose to resist it.

Within the welfare field, Option Consommateurs, the Barreau du Québec, the CDPDJ, the Protecteur du Citoyen, and the AAPI used stacking tactics. Both Option Consommateurs and the Quebec Bar based their assertions on the classical

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[120] "[D]es moyens efficaces et évolutifs seront requis, compte tenu de l'évolution prévisible du système de santé, pour gérer un nouvel équilibre entre les acteurs publics et privés dans la dispensation des services ainsi que de nouvelles modalités de rémunération."

[121] Conception administrative et technique 4.1.

Hippocratic Oath, yet the two groups used it very differently. Option Consommateurs chose to open their plea to the Commission with two excerpts from this historical text (Hippocratic Oath 2008), the first being "Into whatever houses I enter, I will go into them for the benefit of the sick" and the second being "Whatever, in connection with my professional practice or not, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret." Their spokesperson then affirmed that the debate had to be carried out in light of these principles. Option Consommateurs' entire testimony was based on striking a balance between the right to privacy and the right to health. To further reinforce their arguments, they rapidly brought in another strong piece of text namely, the Quebec *Charter of Human Rights and Freedoms*. According to them, the choice between the right to privacy and the right to health could only be made by the patient, since the "right to choose" is found in the Charter, and that the latter always has precedence over any law in Quebec, due to its quasi-constitutional status. Before elaborating on the other groups that used the Charter to back up their arguments, I will now come back to the Hippocratic Oath.

The second group to refer to the Hippocratic Oath was the Quebec Bar and, as mentioned above, they used it in a very different way than did Option Consommateurs. At the basis of the Quebec Bar plea is the notion of professional responsibility. They argued that in front of an incomplete record (which would likely stem from discretionary consent), it might be best to not intervene, considering that an intervention based on false or incomplete information could prove fatal.

In the end, Option Consommateurs and the Quebec Bar were in complete opposition over the matter of discretionary consent, the former argued strongly for it, using the Hippocratic Oath and the Quebec *Charter of Rights and Freedoms* for support, while the latter stood against it, due to a different reading of the same historical text.

Now let us come back to the other mentions to the Charter during the public consultation. As pointed out in a previous chapter, the mandate of the CDPDJ is to uphold, by any appropriate measures, the principles enunciated in the Quebec *Charter of Human Rights and Freedoms*. The group's main concern in relation to the project was that the societal values found in the Charter would be greatly affected if not totally dismissed as a result of what was presented as a simple technological change. Also, more specifically, the CDPDJ wondered whether the infringement on fundamental rights that the project allowed (respect for private life and right to professional secrecy) could be justified within the meaning of article 9.1 of the Charter which stipulated that: "In exercising his fundamental freedoms and rights, a person shall maintain a proper regard for democratic values, public order and the general well-being of the citizens of Québec." (Charter of human rights and freedoms 2008)

Also mentioned in a previous chapter, the Quebec Ombudsperson is responsible for protecting citizens' rights by intervening with departments and agencies of the Quebec Government, including those in the health and social services network, to correct any prejudicial situations affecting citizens individually or as a group. During her presentation, the ombudswoman stated that the government often implemented reforms or programmes too hastily, hence creating unfortunate repercussions on

fundamental rights. In the CpSQ, she was particularly worried about article 5 (respect to private life) and 9 (right to professional secrecy) of the Charter, basically the same matters that bothered the CDPDJ.

Finally, the AAPI is mandated by the government to inform and educate public and private employers about the two access to information Acts. Among other things, this group believed that principles related to access to information, personal information rectification, and consent and communication rules respecting confidentiality should not have appeared in the pre-bill, as they were already part of constitutional laws which have precedence over sector-specific legislations. The Chamber of (civil law) Notaries and the Quebec Bar held a similar opinion.

The stacking tactic was barely used in the IT/IS field, and this seems to be one of the main explanations for the project's outcome. It is however worth noting the references made to advisory firms and to other information systems by the FTQ and the CAI. The Quebec Workers Federation (FTQ), for instance, cited a study published by the Standish Group stating that only 10% of implementation projects were completed on time and within budget, that the average project exceeded budget by 178% and schedule by 230%, and that one-third of the projects were aborted in the middle of production. They then referred to the much publicized story of the GIRES, an enterprise resource planning system (Gestion Intégrée des RESsources) that had been customized for the Quebec Government and launched in 1999 with an initial budget of $85 M. This project which had been evaluated at $255 M at the time of the hearing was aborted in 2003 after spending over $400 M including interest. They used

this example to support their statement that the official figures put forward by the government in relation to the CpSQ ($159 M) were most probably too low.

The CAI also referred to an information system to support its arguments. The Access to Information Commission was concerned about decisions related to database centralization and database management in the pre-bill. In fact, they maintained that the RAMQ may not have been the best place to store and manage the CpSQ's centralized database considering the number of other administrative databases they already had under their responsibility. The CAI was especially worried about the possibility of performing data coupling across these databases, a usage deemed highly unethical considering the double role of the RAMQ as public health insurer and database manager. Based on the pre-bill, the CpSQ data should have been anonymized, but history tells otherwise they argue, illustrating their fear with the following story.

In the early 80's, a new database called Med-Écho was created by the MSSS in order to manage data related to hospitalizations. Information was transmitted in an anonymous manner by the health institutions, thus making it impossible for anyone, not even the Ministry, to link data to patient names. Some years later, the CAI discovered that the Ministry had found a way to trace each record's name, and that the said database was no longer anonymized. Furthermore, individuals had requested access rights from Med-Écho in order to use the data for research purposes. For the CAI, this reference to the database served to support their idea that data compartmentalization, or at least management of the CpSQ's centralized database by

an agency other than the RAMQ would guarantee security better than any technical solution (such as anonymization).

As mentioned earlier, the government provided no figures or numbers to support their technological choices and the absence of such documents raised suspicion among citizens. They did try to reinforce their arguments a couple of times with assertions from consulting firms such as CGI and Cognicase, but they never presented any evidence of them, nor did they release the (apparently) many studies that had guided their choice of the technological solution put forward in the pre-bill.

Staging and Framing

The staging and framing tactic was used by the government, perhaps unwittingly. This is because the only documents available to the citizens who wanted to participate in the public consultation were the pre-bill and the two briefs submitted to the Cabinet (public sections only). No other communication efforts were made to present the project to the public. As mentioned by Mr. Péladeau in a letter addressed to the RAMQ enquiring about such documents:

> Detailed explanations are essential if we want to publicly conduct a computerization project that will affect services offered to the population. Indeed, such a project always risks being bogged down in conflicts that

> result more from (mis)perceptions than from the complexity of the technology per se.[122] (IRCM 2008)

Captation

When within the welfare field, the Minister kept mentioning that the electronic sharing of information would improve health care; he generalized the phenomenon in order to persuade opponents to accept the idea of the smart card. This is basically the only expression of captation that occurred during the public consultation even though the government would probably have benefited from a bit more preparation in this area. Particularly as they were surprised to see so many points of disagreement about their project and that the only "generalization" they had prepared was about the importance of sharing information.

Obligatory Passage Point

In each field, participants tried to impose a different obligatory passage point for the project. Within the political field, the *Rule of Law* can be seen as serving this purpose. This principle stipulates that governmental authority should be exercised in accordance with written, publicly disclosed laws adopted and enforced by established procedural steps, referred to as due process. Considering that the current Quebec

[122] "Des explications détaillées sont indispensables au succès d'une démarche publique d'informatisation de services à la population. En effet, une telle démarche risque toujours de s'enliser dans des conflits découlant plus des perceptions que de la réalité même des dispositifs compliqués en cause."

Health Record (DSQ – Dossier Santé Québec) project completely left out the administrative objective that was so criticized by Professor Prémont, one can assume that her arguments were strong enough to force the government, which had to compose with a modified goal, to make a detour from its original plan.

Within the welfare field, it was definitively the opting-out method requested by the doctors that constituted an obligatory passage point. After many tergiversations on the topic, pleasing the CAI one day and the doctors the other day, the Quebec Government decided to include the opting-out method in a law at the end of May 2008, thus putting an end to the debate. The voice of the doctors finally won out over that of the privacy advocates.

Finally, within the technological field, so far no obligatory passage point seems to have been imposed by any group. From what we know, the current project still faces the same technical conundrums, as most technical specifications remain obscure to most people.

The professional associations did not necessarily league on one side of the debate, nor did the patients' associations. This is because all had different interests in the matter from the outset, interests that were the result of encounters with several "plug-ins" throughout their life. In fact, this is where the notion of habitus deferred from the previous chapters comes into play, although under a different terminology.

Individualizers

In the Bourdieuian analysis chapters, the examples of habitus were deferred here, since Latour offers us better tools such as plug-ins and applets (things he calls individualizers) to study this concept. Of course, it is not the intent here to thoroughly study the habitus of each and every participant from the public consultation. Instead, the idea is to analyze some exceptions, i.e., some groups or individuals that, at first glance, do not seem to fit in the field where I put them.

Political Field

It is not very strange to see that both the elected Quebec Government and the Opposition Party are playing within the political field, as their representatives have chosen to work in politics – and quite possibly, for some, to study politics as well –, so they have been "loading" different and pertinent applets for some time. The same can be said about Mrs. Prémont who, as a law professor, has specialized in these matters for many years. What is more interesting is to understand how it is that organizations such as the FIIQ, the COPHAN or the RIOCM deliberately chose to play within this field.

From reading their brief, I learned that the FIIQ represents 45 500 nurses from across the Province of Quebec, and that they had always actively participated in the different consultations aimed at health system reform. As such, they were well aware of the pilot schemes performed in Laval, and earlier in Rimouski, and they had rapidly

concluded after having read the pre-bill that the proposed project was very different in essence from what had been done in the past. Puzzled by this fact, they then tried to make sense of it and looked for a plug-in that would help them read the situation adequately. They used the *Act to Establish a Legal Framework for Information Technology* (R.S.Q., chapter C-1.1) passed in January 2001, and decided to build their argument in light of this bill. At the time, they realized that they needed additional plug-ins and, as such, they used official documents about the information highway policy in Quebec[123] and the governmental info highway.[124] The FIIQ, which wrote the brief and testified in front of the Commission, was therefore an actor-network minimally composed of the FIIQ, the pre-bill, R.S.Q. C-1.1., and two other governmental documents about the information highway. It is in trying to link the pre-bill to their understanding of these other documents that they came up with the striking title[125] for their brief.

The COPHAN represents about thirty organizations of physically or mentally handicapped individuals. The plug-in they used to better understand the situation is the Clair Commission Report that was mentioned earlier. The RIOCM represents community groups that contribute to the health and social services in Montreal region. Their assessment of the situation is also influenced by their reading of the Clair Commission Report, but also by previous participations in public consultations. As such, they rise up against the fact that the documents at the basis of such important consultations are always made available just before summer vacations or just before Christmas Holidays, which leaves very little time for preparing the necessary briefs.

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[123] Gouvernement du Québec. 1998a. *La politique québécoise de l'autoroute de l'information: Agir autrement*, Gouvernement du Québec, Quebec City, 98 p.
[124] Gouvernement du Québec. 1998b. *L'inforoute gouvernementale. Pour mieux servir les citoyens et les entreprises*, Gouvernement du Québec, Quebec City, 69 p.
[125] Un détournement majeur – A major hijacking.

Welfare Field

Within the welfare field, just as in the political field, some organizations are natural players: the CAI, the CDPDJ, the AAPI, essentially all the privacy organizations. But there are also interesting outliers here. First, there is the ADQ, an association that represents diabetics, which strongly supported the project, since it saw it as the best way to manage a systemic disease. This is in total contradiction to the CPM, which represents sick people more generally and which stood fiercely against the project. The habitus of individuals with diabetes is highly influenced by previous experiences where they were not able to reveal important information related to their health condition either because they were in a coma or simply because they could not remember all the details of their complex illness. For them, the right to health prevailed over the right to privacy, in complete opposition to the CPM.

The FMRQ is also an interesting case. The federation representing resident doctors was a fervent objector to the project and framed its argument in great part upon their assessment of other governmental projects (in health) that had either been aborted, due to a lack of money, or never started in the first place. They used this experience to further their understanding of the situation, rather than the technological knowledge resulting from their average age.

IT/IS Field

Finally within the IT/IS field, it is normal that many participants have the ability to judge the system in light of their everyday processes. In fact, process diagrams are often among the first requirements of a well-planned information system analysis and design project. There are however outliers in this field as well, the COPHAN and the ARC-FACEF among others. The COPHAN was described earlier. Interestingly within the IT/IS field, they admitted their unfit habitus – "we do not necessarily have the resources to draw a portrait of all the possible models" (Quebec Hansard, March 14 2002) and, in a sense, called for a greater usage of the stacking tactic by the government – "we would have liked to have had other models." (Quebec Hansard, March 14 2002) The ARC-FACEF represents several consumers' associations. It based its argument on recent events that had occurred where databases had been broken into and information had been stolen. One can assume that these were events such as the Human Resource Longitudinal Labour Force File scandal that occurred in 2000, or the information leakages that took place at the Société de l'assurance automobile du Québec[126] (SAAQ) around the same period.

Summary

This chapter used ANT tools in order to complement the Bourdieuian analyses provided in the previous chapters, especially for explaining the habitus of some

[126] Literally translated as the Quebec Automobile Insurance Corporation, this governmental agency is responsible for providing public automobile insurance, as well as administering Quebec's drivers' licences and vehicle licence plates.

participants. It also evaluated the technology in action with ANT tools usually devoted to the analysis of scientific texts. I contend that there is not much difference between making a point in a public consultation in order to influence the outcome, and making a point in an academic text in order to influence the course of science. As such, the analysis of the fortification tactics used by the participants can be very insightful in order to improve future performances in similar projects / arenas.

Section III

What's in it for MIS?

Introduction to section III

NOW that story has been looked at from various sides, it is now time to pause and reflect upon the learning we, as MIS scholars, can make out of it. Chapter twelve therefore tackles the problem of analyzing the situation using conventional MIS models whereas chapter thirteen compares and contrast the public sector reality to the private sector one usually studied in our literature. Finally, chapter fourteen offer a discussion of further matters as well as concluding remarks.

Usual Suspects Are MIS Adapted to the Task

Problems with using MIS models to analyze the story

So far, the story of the Quebec Health Card has been recounted four times, the first version was as neutral as possible, whereas the three others offered different panoramic views of the situation. The analyses following these panoramas (fields) demonstrated that the main capital at stake varied from one field to the other and that symbolic violence was manifested in different manners in each of them. Further, the analysis using Latourian tools underlined other intricacies that would have stayed hidden had this type of analysis not been performed. In the present chapter, we will subject the situation to the usual MIS models of resistance to change and user participation in order to evaluate how they behave with interorganizational information systems.

The Multilevel Resistance to Change Model

The Lapointe and Rivard (2005) model posits that resistance behaviour is the consequence of a perceived threat resulting from the interaction between the IS/IT (either materialized or foreseen) with some initial conditions. I am not saying that this model is wrong; in fact I salute the effort made to open the black box and shed

some light on a concept that is usually taken for granted. I nevertheless question the usefulness of the model to analyse the present situation.

The first concern with the model is epistemological. The article by Lapointe and Rivard (2005) does not provide a definition of initial conditions. It rather presents four different definitions of the notion from the authors of extant resistance to change theories that were aggregated to form the multilevel model. Markus (1983) defines initial conditions as the political setting found in the location into which the system is introduced, whereas Joshi (1991) defines it as already existing inputs and outputs (or processes). Marakas and Hornik (1996) consider initial conditions to be established routines and modes of work whereas Martinko and his colleagues (1996) consider it to be the attribution schemata of the individual facing the new IS/IT. As such, the notion is difficult to apply as it encompasses simple moderating variables such as age, education and seniority as well as more complex ones such as personal beliefs and organizational variables. In a situation such as that of the $CpSQ_1$ where so many groups and individuals are concerned, a great number of initial conditions could be considered. As such, even if we had a precise operational definition of the concept, we would end up listing so many it could quickly end up unmanageable.

A similar assessment can be made about the object, another notion that is not clearly defined in the Lapointe and Rivard (2005) paper, which instead quotes the definitions offered in the four papers at the basis of the multilevel model. These go from the patterns of interaction prescribed by the system (Markus 1983) to the characteristics of the IT (Martinko, *et al.* 1996), mentioning on the road inputs and outcomes prescribed

by the system (Joshi 1991) and new routines and modes of work brought about by a new IT (Marakas and Hornik 1996). As mentioned before, there was no consensus on how the issue at the very basis of the CpSQ project was viewed by the fifty groups or individuals participating in the public consultation (forty-eight briefs, the elected party and the opposition party). For some, it was the smart card, for others, the system behind the smart card, a centralized database, an electronic record to replace the legal medical paper forms filed by the physician after each visit. Moreover, some thought the issue was all of the above and others, none of the above...

As a result, we would end up with a great number of variables of each type (initial conditions and object) that would further interact with one another to influence the behaviour towards change. Clearly, in our situation, this would not be practical and the model would thus have to be used differently. How so? A simple way would be to divide the participants into a few groups with similar initial conditions and analogous appraisals of the object to be implemented. In theory, this would work but the problem stems from how we divide the participants in the first place, as intuition does not always prove right, quite the opposite. For instance, the present situation probably calls for the grouping together of all patients into one corner, care providers into a second one, and governmental agencies into a third one. As seen earlier, the reality was quite different, and different groups of doctors had very different discourses. As Latour wrote: "The task of defining and ordering the social should be left to the actors themselves, not taken up by the analyst." (Latour 2005, p. 23) Put differently, we have to let the story unfold and speak for itself since it composes the empirical material at the basis of our understanding of the situation. The story must be seen as our

"laboratory experiment," and it is during its deployment that the pertinent groups will appear to our eyes. I believe section II does a good job in leaving the floor to the actors.

The second concern with the model is more ontological. As presented, it posits that the initial conditions (the social) interact with the object (the nature) to influence the behaviour towards change. Following the precepts of ANT, I rather contend that on the one hand, it is the initial conditions that frame how the protagonists picture the technology yet on the other, it is because of how the technology is framed that some initial conditions emerge. To exemplify this, let us look at some examples taken from the three panoramas presented earlier.

Remember Mrs. Prémont, the lawyer who advocated, in the political field, that the public consultation process was flawed in the first place. First, let us see what we know about the initial conditions that theoretically influence her behaviour. Her brief contains an appendix entitled "Presentation of the author" where we learn that she is a member of the Quebec Order of Engineers (OIQ – Ordre des ingénieurs du Québec), a lawyer and a professor of law at McGill University since 1995. She was a member of two work groups organized by the European Union to follow several health smart card projects going on in Europe and Quebec (WG-5) and later to oversee the Netlink European project studying the use of health smart cards in facilitating interoperability across boarders (WG-6). She was later appointed president of the surveillance committee for the Laval health smart card pilot scheme and had just finished (at the time of the hearing) writing a report requested by the

Romanow Commission on the future of health care in Canada. During her presentation at the public hearing, she restated the same facts, adding at the end that despite all of this, she was participating as a private citizen. Second, let us look at her appraisal of the object. Here is the opening paragraph of her brief:

> The meaning of the pre-bill entitled 'Act on the Quebec Health Card' is vague to say the least. It becomes decipherable only when read in continuity with the three briefs written by the Ministers of Health and Social Services (Mrs. Marois and Mr. Trudel) and submitted to the Cabinet between June 2000 and December 2001.[127] (Prémont 2002, p. 3).

For Mrs. Prémont, the fact that the project was presented as a pre-bill is the object's most important aspect, notwithstanding her statement about participating in the hearing on a personal basis. Her appraisal of the object would have probably been quite different had she not been a lawyer who had devoted so many years to the subject. After all, she is also a potential patient, female, of a certain age, with or without children and possibly with parents who are slowly losing their autonomy. Moreover, the project was presented as a pre-bill for everyone, yet not everybody appraised it as such, and most people looked beyond this to assess either the technology or the system at the basis of the "Act."

Now let us perform the same exercise with the Fédération des médecins résidents du Québec (FMRQ – Quebec's Federation of Medical Residents), who, like others in the welfare field, argue that adopting a smart card would worsen accessibility to

[127] "Le sens de l'avant-projet de loi intitulé Loi sur la carte santé du Québec est opaque, et pour cause. Il ne devient déchiffrable que lu en continuité avec les trois Mémoires des ministres de la Santé et des Services sociaux (Madame Marois et Monsieur Trudel) déposés devant le Conseil des ministres entre juin 2000 et décembre 2001."

healthcare and thus limit patients' right to health care. The FMRQ represents the 2 000 resident doctors (general practitioners or specialists) practicing in Quebec, who consider themselves to be first line attendants in the health care system. These are young people, a slight majority of which is female, that will eventually take over the province's medical activities, yet their appraisal of the object is unusual for people with these characteristics. The object at the basis of their behaviour seems to be "yet another large technological project that the government will not be able to carry through." Instead of playing the role of technological geek that is usually attributed to them, they chose to wear the hat of the disillusioned youth.

And what can be said about Mr. Marinier who contended that within the IS/IT field health summaries were a necessity, but that they had to be properly protected with Public Key Infrastructure (PKI) in order for them to be fully secure? In his brief, he mentions that he is a computer scientist with 24 years of experience, 15 of which were in operational and technical management of large information systems for the federal government. Over-specialized in security and in PKI, Mr. Marinier is also the father of a son who has battled cancer for several years (and so far won). Both his brief and his plea in front of the Commission concern mostly the health summary (i.e., the object), especially confidentiality and management of consent.

The question to ask here is whether there would have been alternative ways to present the object in order to force other initial conditions to emerge for Mrs. Prémont, the FMRQ and Mr. Marinier? A white paper or a green book perhaps would have done the job for Mrs. Prémont. A longitudinal plan, including all the large governmental IS

projects, might have worked for the FMRQ. Of course I can already hear the counter-argument: "But there is no other system, you must deal with the system as it was presented by the government!" This is true, but this is not the point here, as we are not talking about different artefacts per se but rather about different appraisals of the same artefact. The important thing to understand is that there are several other initial conditions out there that are not apparent, simply because they are not pertinent to the object (i.e., la Carte Accès Santé) as understood by the protagonists. These initial conditions are in a latent state (remember the plasma), waiting for an occasion to emerge, or, put differently, for other actors to join in order to form actor-networks.

Considering that initial conditions are mostly social characteristics and that the object appeals directly to nature (or technology), the Lapointe and Rivard (2005) model can be restated as: "the interaction of society with nature influences users' perceptions which then lead to their behaviours towards change." Society and nature are therefore considered the causes of resistance (or acceptance) to change. According to actor-network-theory, however, nature (or society for that matter) does not tell us anything, as it proves something only after it (as in "the something") has become a fact, or a settled controversy. This general precept was translated into two rules of method by Latour, two basic premises (of a total of seven) that must be accepted before attempting to analyze any empirical facts from the "science, technology and society" domain (Latour 1988, p. 99).

> Rule 3: Since the settlement of a controversy is the cause of Nature's representation, not its consequence, we can never use the outcome, Nature, to explain how and why a controversy has been settled.

> Rule 4: Since the settlement of a controversy is the cause of Society's stability, we cannot use Society to explain how and why a controversy has been settled. We should consider symmetrically the efforts to enrol human and non-human resources.

In the present situation, the controversy has not yet been settled and this explains the fuzziness of the object's representation, as well as the instability of the initial conditions observed in the CpSQ project. Far from being a drawback, this is an opportunity to study technology in action[128] and take interest in things that would have otherwise been dismissed by the model. We simply have to let the actors play.

The third concern is methodological. In their paper, Lapointe and Rivard (2005) acknowledge the possibility that their model might be "cross-level," i.e., that individual and unit-level constructs may influence group behaviours. This is interesting, as it adds a level of complexity to the "resistance" black box. Even though the positivist perspective (the one adopted in their article) provides "cross-level" model specifications (Kozlowski and Klein 2000), it is difficult to see which of these models they apply. The different epistemological and ontological point of view adopted in ANT gives room to such mixes of levels in a much less restrictive way, since it is at the basis of the theory that people assemble into and disband from actor-networks all the time. As such, an individual opinion is never purely individual since it is the result of previous encounters or associations.

How can we refine the model to take into account these three concerns? First and foremost, the model has to depict more than an interaction between the initial

[128] To paraphrase the title of Latour's 1988 book *Science in Action*.

conditions and the object. As explained above, it is closer to a mutual influence (see the second concern). A stakeholder's perception results from that which affects the resistance behaviours which will be played out in the arena. In the arena, the awareness of the assessment of others might influence initial conditions as well as the appraisal of the object. A retroaction is thus necessary. Finally, there are several points where the IT/IS becomes temporarily stabilized to form black boxes. At any moment, such a black box can be reopened and wake the model up for another lap.

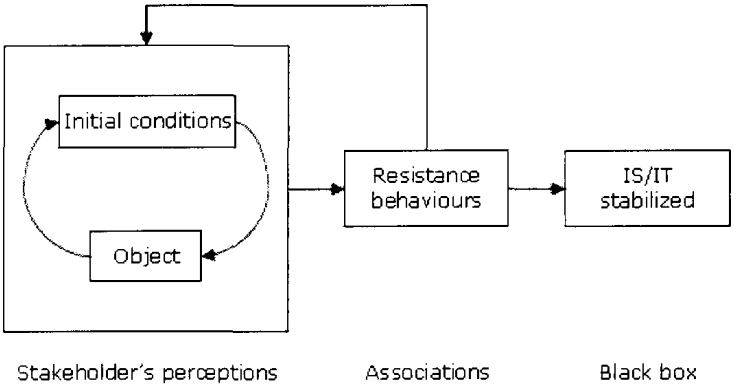

Figure 11 – Refined Resistance to Change Model

The Emergent Causal Processes Model of IS Participation

The Markus and Mao (2004) model of IS participation posits that there exist causal processes both in the links between participation activities and outcomes and in the participation processes themselves. These links are emergent – that is, they stem from constant social negotiation and consensus building. The model is not based upon contingency theory like most traditional IS participation theory, but is rather strongly inspired by complex adaptive system theory.

Following the logic of the model, three stakeholders of the same type, going through identical participation activities should perceive the system similarly. In order to test this, let us look at the appraisal of three distinct user groups (physicians, pharmacists and nurses) who participated in the advisory committee set up by the RAMQ in 2001 in order to work out the details of the CpSQ project and who later submitted briefs to the government and took part in the public consultation on the pre-bill.

The following excerpt from the conclusion of the Ordre des pharmaciens du Québec's (OPQ – Quebe's Order of Pharmacists) brief summarizes this group's assessment: "[Y]es to the principle, no to the project as it is presented and as we know it for having participated in its development"[129] (OPQ 2002, p. 19). Remember that the "principle" here is the sharing of clinical information in order to improve the quality as well as continuity of care. It was demonstrated earlier that the objectives of the CpSQ, as presented by the government, did not quite fit this basic principle. The pharmacists are therefore opposed to the pre-bill.

As for the physicians, the CMQ state in their brief that: "It is wearily and with a certain degree of scepticism that we hope that this time will be the right one and that the doctors will finally have these tools at their disposal, which will have positive effects for their patients."[130] (CMQ 2002, p. 4) The CMQ's position is rather exceptional considering that despite many doubts about the technology/system, as presented, they still support the pre-bill. The following excerpts from their brief

[129] "[O]ui au principe, non au projet tel que présenté et tel que nous le connaissons pour avoir participé à son développement."

[130] "C'est donc sur un fond de lassitude et avec un certain degré de scepticisme que nous espérons que cette fois sera la bonne et que les médecins disposeront enfin de ces outils, pour le plus grand bénéfice de leurs patients."

explain this clearly. First, they mention in their opening statement that: "We however preferred to come and share our views on a constantly evolving project with [the government] rather than on a pre-bill."[131] (CMQ 2002, p. 2) Later on, they add:

> Our vision is that as the computerization of the health infrastructure progresses, professionals will have to share locally clinical information that is much more complete than what the health summary contains. This is what we call the interoperable health record.[132] (CMQ 2002, p. 7)

The physicians therefore support an evolving project, a kind of work in progress.

Finally, the nurses are in total disagreement with the project. The FIIQ considers that the pre-bill creates a diversion on three different levels. For one thing, they claim that the main goal of the project seems to be the replacement of the actual health insurance card, in order to reduce fraud and better contain costs that are presently deemed out of control. This is to them the first diversion from the initial objective which was to facilitate the circulation of clinical information so as to improve the quality of health care provided under the new ambulatory shift reality. Also, they maintain that the pre-bill completes the Act to establish a legal framework for information technology (R.S.Q., chapter C-1.1)[133] and is an initial step in the deployment of the information highway as well as the governmental highway. As such, they believe that the project does not concern one sector but rather all the citizens of Quebec and it should therefore be presented as such to the population. This constitutes the second diversion from the pre-

[131] "[N]ous avons toutefois préféré venir échanger avec vous sur un projet en devenir plutôt que sur un projet de loi."
[132] "Notre vision est qu'au fur et à mesure que l'informatisation du réseau progressera, les professionnels devront pouvoir partager localement une information clinique beaucoup plus complète que celle que contiendrait le résumé de renseignements de santé. C'est ce qu'on appelle le dossier patient partageable."
[133] Loi concernant le cadre juridique des technologies de l'information, L.R.Q., chapitre C-1.1.

bill's initial objective. Finally, they argue that the CpSQ reopens the debate on citizens' identification cards, as the identification capacities of the card presented in the pre-bill would not only serve the health and social service sector. This to them constitutes the third diversion from the initial objective of the CpSQ.

In the conclusion of their brief, the nurses state that they are favourable to the idea of an interoperable health record in order to improve the quality of health care and services, and that the pre-bill submitted by the government does not meet this objective. In the internal documents used to prepare the hearing, government officials describe the nurses' position as ambiguous.

The reason why the model is difficult to apply to the present situation is similar to what causes the inadequacy of the resistance to change model, i.e., the instability of the IT/IS. How can we compare the assessment of success of an IT or IS when the different protagonists' appraisal of it differs markedly from one to another? One considers the pre-bill, the other considers the evolving project, and the third one mixes the pre-bill with the concept of an interoperable health record. Nothing can be done about this, because during a pre-implementation stage, the black-box is still wide open. Also, at this stage, what can be considered a success is different from our usual understanding of the notion in an implementation context. In the present situation, the acceptance of the pre-bill and the deployment of the CpSQ as is by the government would have been considered a failure by the OPQ, a success by the CMQ and a half-hearted success by the FIIQ.

How then can we refine the model in order to encompass this reality? To begin with, there must be a way to convey that the appraisal of the IT/IS by the stakeholder matters a great deal, as do the initial conditions. Together, they influence the level of interest in the matter, which in turn affects the effort exerted in their participation activities. Of course, as mentioned earlier, initial conditions and object mutually influence each other and these links must therefore be depicted in this model as well.

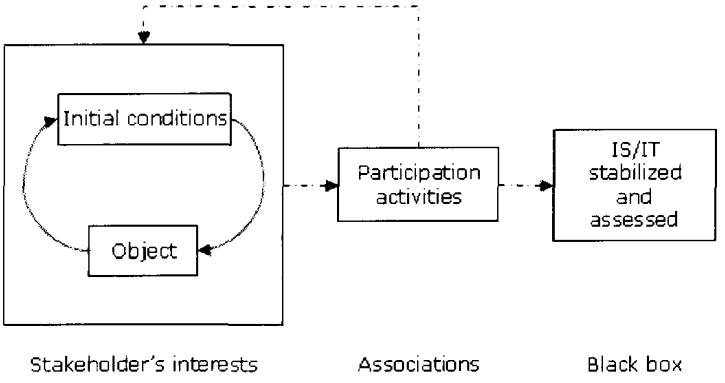

Figure 12 – Refined User Participation Model

Note that the links between the stakeholder's interests and the associations' as well as the one between the association and the black box were drawn using dotted lines to respect the original spirit of Markus and Mao's model (2004), which depicts emergent processes rather than a temporal and longitudinal process.

The study of the CpSQ project led us to a larger epistemological problem, a somewhat tailored version of the chicken or the egg dilemma. Did the participation activity (i.e., the public hearing) give rise to expressions of resistance and acceptance or was it in itself a way to show resistance or acceptance? I contend that, in the present situation, resistance to change and user participation occurred concomitantly and that it is possible to conflate the two refined models to form a more comprehensive one.

As we can see, figures 10 and 11 are very similar since they are both based on the same logic. First, technology and society become stabilized only once the controversy has been resolved and up to that point, technology and society have a mutual influence on one another and frame the stakeholder's state of mind. Second, this state of mind influences the way participation activities and resistance behaviours are played out, including the different coalitions that are temporarily formed so as to reinforce stakeholders' influence on the stabilized version of the IT/IS. It is only once the IT/IS becomes stable (a black box) that an assessment about it can be made.

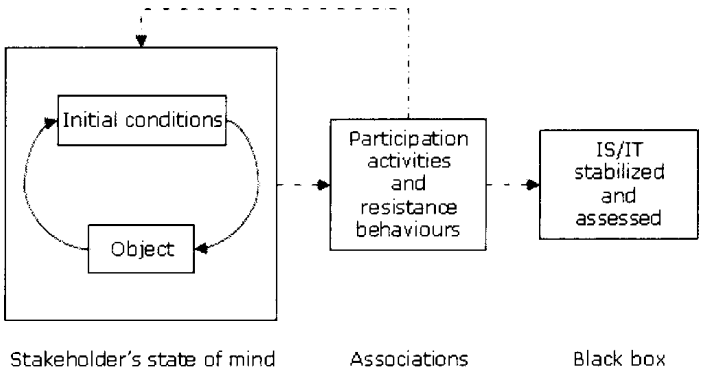

Figure 13 – Comprehensive Model of Resistance to Change and User Participation

In Latour's terms, we are talking about several mediations occurring over time, and leading to a black box. In *Pandora's Hope*, he offers the model reproduced in figure 14 and explained in the following excerpt:

> Goals are redefined by associations with nonhuman actants, and [...] action is a property of the whole association, not only of those actants called human. [...] [T]he number of actants varies from step to step. The composition of objects also varies: sometimes objects appear stable, sometimes they appear agitated (Latour 1999, pp. 183-184).

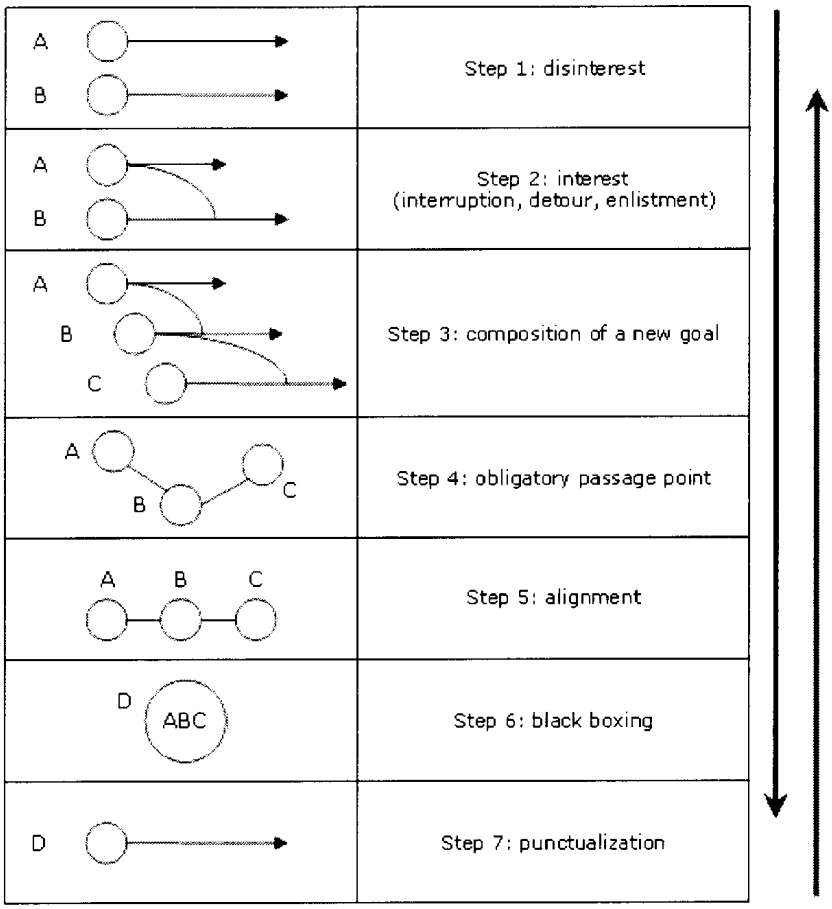

Figure 14 – Mediation as Black Boxing (Latour 1999, p. 184)

One must not fall into the trap of thinking that only humans and nonhumans can be associated, as this is far from the truth. What happens is that people often associate because of nonhuman agents. In other words, their association with a common nonhuman agent brings them closer and ends up forming an actor-network which, after a while, can be considered as a more homogenous group. This is exactly what happened to the several groups who gathered around documents such as the Quebec Charter of Human Rights and Freedoms or the Hippocratic Oath to form the basis of the "welfare field" discourse.

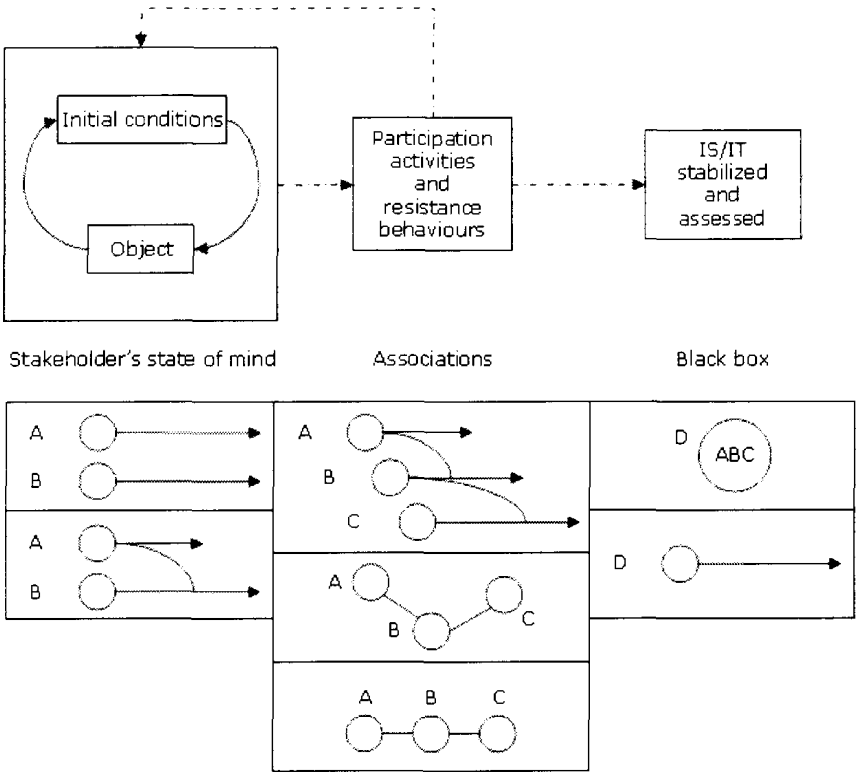

Figure 15 – Superposition of the Two Models

At the risk of repeating myself, Latour's relativist vision indicates that the moment something introduces a difference into an agent's course of action, it becomes a mediator. This is exactly what happens when the object meets the initial conditions (as in the composite model), and this is also what is meant by the two first steps in Latour's mediation steps model. The human agent A encounters the non-human agent B and this in some way moulds the state of mind of the human and influences the way he/she will face the situation.

In the middle section of the composite model, the human agent is actively seeking associations with other agents, especially human ones, in order to strengthen his/her argument. What happens is that the path of the human actant will be interrupted by another actant and his modified goal (remember that the initial goal has already been

transformed by the previous encounter with the object) will be diverted. Little by little the agents will be enlisted into more or less official and lasting groups. This will lead to the formation of a third goal, a composite one different from the two (or more) initial ones that the group will try to present as an obligatory passage point (OPP). An OPP is a set of conventions, rules, assumptions and ways of operating that must be followed by an actor who wants to join the network. As Papadopoulos and Merali wrote in a 2008 article: "The concept of the obligatory passage point is a powerful one, as it articulates conscious commitment of actors to specific networks with explicit and visible conditions for coherence within the network." (Papadopoulos and Merali 2008, p. 42) Alignment usually follows from OPP. Again here, there are striking similarities between the composite model and Latour's mediation steps model.

After alignment has occurred, chances are that a black box will temporarily be created by the group, yet similar mediations will continually occur (the output of step 7 will become an input of step 1) until the totality (or the important majority) of the stakeholders have the same appraisal of the technology so that controversy is closed for a longer period of time (as ANT considers nothing to be permanent). Once more, the composite model corresponds well to Latour's mediation steps model.

IT/IS Implementation or IT Project Management?

One can speculate on whether the CpSQ project really is a (pre-)implementation situation or whether we should rather have seen it as an IT project to be managed. At this point, it appears that one of the biggest challenges of the CpSQ is that it is an

interorganizational system. The study of the table of contents of several books concerning IT project management, as well as a quick look at the *Project Management Book of Knowledge* (PMBOK) proved that this topic has not been covered in any of these publications. What's more, some precepts at the basis of IT project management methodologies seem very difficult to apply to an interorganizational system.

For instance, one important step in initializing an IT project is to define measurable organizational value (MOV), i.e., the project's overall goal and measure of success. (Marchewka 2006) It is important that this MOV be measurable, provide value to the organization, be agreed upon and be verifiable. As seen before, in the case of an interorganizational system, we face a multiplicity of appraisals of the IT/IS in the first place combined with a great number of initial conditions. Therefore what is valuable for an organization may very well be worthless (and even cause damage) to another one. This makes it almost impossible for all the stakeholders to find a middle ground. Furthermore, Marchewka (2006, p. 40) mentions that "an organization should not undertake projects that are not clearly linked to its overall mission." What then when the project mobilizes many different organizations with as many different missions?

Summary

The purpose of this last section was not to thoroughly analyze the situation in light of an IT management project methodology. It was rather to demonstrate that by looking at an IT project in the context of a management situation does not make it easier to

perform an MIS analysis than when looking at it in a pre-implementation stage; and this therefore comforts me in my decision to use the latter over the former.

The different perspective offered by these the ToP and ANT provided very good insights that allowed me to refine resistance to change and user participation (MIS) models. Whereas each revised model alone improve our understanding of resistance to change for the former, and user participation for the latter, I truly believe that the comprehensive model goes one step further in refining our understanding of MIS implementation in general. As will be discussed in the last chapter, three notions emerged as the main lessons learned in doing this research, they all culminate to the idea of performing research in a more holistic fashion. This is what the comprehensive model allows to a certain extent and as such, I contend it reflects more accurately MIS implementation situations unfolding within interorganizational settings.

About Ethics

[rē-'flek-'si-və-tē] 5

WHEN I completed the literature review chapter before proposal defence, I included a section on ethics, considering that it had come up as one important issue in the NHII literature (for other countries). These ethics views were therefore nodes ready to be picked in N*Vivo when I would code my corpus. Interestingly, none of these were used in the end yet the section was not removed from the thesis. When a question about that popped during dissertation defence, it trigerred a reflection about how ethics really played out during the CpSQ project.

This is when I noticed that it was possible to match a different ethics view to each parallel story I had recounted. These views were never mentioned by the participants per se but were rather emerging from the way I had framed the discourse. Thus, the political field was clearly about the stokeholder theory, as people within that field were either trying to gain more as a stokeholder (i.e. the government and maintly, the RAMQ) or rised up against those stokeholders, questioning the (non) democratic aspects of the public participation process, as it was planned by the governing officials. The IT/IS field was broadening the set of people concerned with the project, mainly to the professionals who did not see their work processes taken into account by

the proposed system. Hence, this field presented considerations that were closer to the stakeholder theory. It is really within the welfare field that the broader set of people were concerned and it makes sense to see this field well aligned with social contract theory, where all members of the society are brought into the equation. After all, the welfare state is a society choice therefore everyone is concerned by changes made to its structure.

Does that mean concerns from the welfare field should necessarily weight more in the balance? This is the crux of the matter with ethics decision. In a perfect world where money would grow out of trees, the answer could probably be yes. Yet once we come back to reality and see how much healthcare expenses cost every year to the government, the decision becomes less clear-cut. What is more, I would be very pretentious to pretend I know the answer to this question. Considering that the controversy about Quebec HII is still ongoing, it is up to the people to assemble in networks that will mediate the stabilized version of the system. This is what we are starting to see at this very moment and this calls for a new study, this time on the terrain.

Different Fields Mean Different Realities

Or do they?

THE following chapter aims at comparing the public and private sector fields. The goal of this exercise is twofold. On the one hand, it will allow us to assess certain difficulties posed by translating concepts or notions usually developed for the private sector for their use in the public sector. On the other hand, it is an opportunity to see whether the story can inform the private sector.

The main capital at stake in the private sector field is indubitably economic, as the main goal of many companies is to enhance shareholder value or, to generate more profit for those companies that are not listed on the stock exchange. Most decisions are therefore made with profit in mind, and this usually drives exercises such as business case development or cost-benefit analyses, to name but a few. As was seen in the first section, although money is a crucial aspect in the private sector, new ethics considerations are gradually appearing in many private organizations. Still most of the time, a consequentialist perspective is adopted and social contract theory is rarely the path followed (Smith and Hasnas 1999). Many ideas and plans in terms of information system development thus remain completely secret and obscure to outsiders until their deployment, even though these outsiders are the ones on which such systems will have the greatest impact.

The main capital at stake in the public sector field is far more difficult to assess. Of course, economy holds an important place in it as well, but it does not carry as much weight as in the private sector. Maybe this is because contrary to private organizations, governments cannot go bankrupt. Instead of paving the road to ruin, governmental decisions that become economic fiascos end up costing citizens' money and decreasing government officials' credibility. This latter aspect concerns symbolic capital, which is a much bigger stake than economic capital in the public sector field. Therefore public sector organizations (or the elected government for that matter) are more inclined to follow precepts of social contract theory, or at least stakeholder theory (Smith and Hasnas 1999) considering that their good citizen's behaviour more ore less guarantees more votes when they come up for re-election.

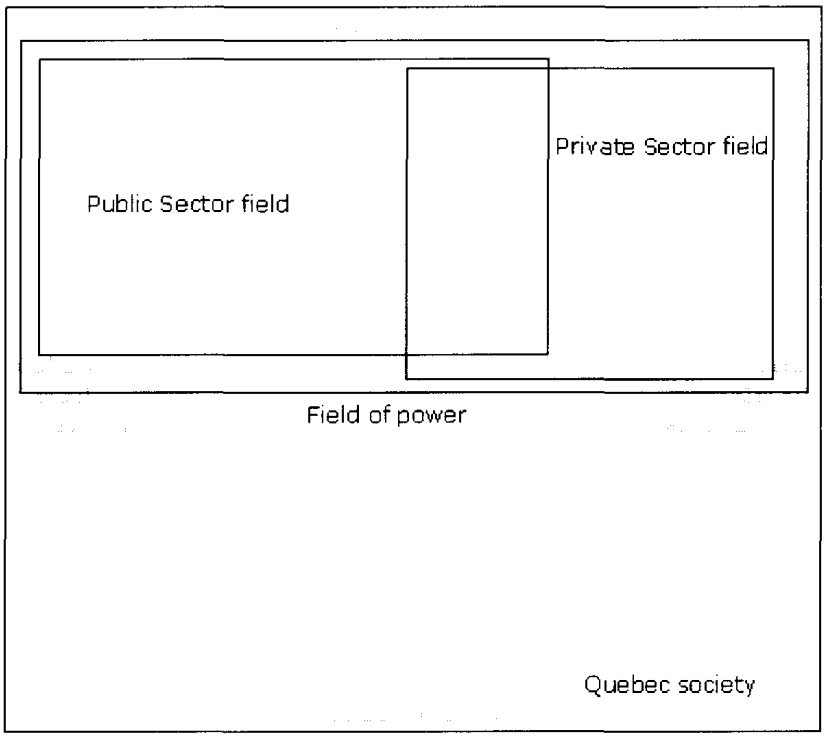

Figure 16 – Representation of the Fields Within the Field of Power

We can therefore see that within the overarching field of power, the public sector field is located at the left of the private sector field, and it is also wider, since in includes greater possibilities.

Private Sector's Concepts Translated to the Public Sector

Holding a public consultation on a project is a way for the core team – a term borrowed from the IT project management lingo – to balance the interests of all stakeholders. The project must bring value to the organization (here the government) without violating the rights of those parties (Smith and Hasnas 1999) and as such, it respect the precepts of the stakeholder theory (in ethics). Two questions arise from this assertion. First, does a public consultation guarantee the integration of stakeholders' rights in its equation? Second, who should verify whether the interests are balanced or not? In other words, who exactly should make up the core team?

Our case offers a straightforward answer to the first question, and it is negative. Examples of this are given by many participants, especially those who sat in coordinating group meetings, where consensus had apparently been reached, but which never made it to the pre-bill. Interestingly, this can be explained by the answer provided to a slightly modified version of the second question: Who made up the core team leading the project?

Although the project fell under the responsibility of the MSSS, the Health and Social Services Ministry, it appears that the Quebec Health Smart Card project was led by

the RAMQ, the Quebec Health Insurance Board. Below is a quote from the RAMQ's web site that explains the organization's mission:

> Established in 1969, the Régie de l'assurance maladie du Québec comes under the authority of the Minister of Health and Social Services. Its mission is to administer the Health Insurance Plan and the Public Prescription Drug Insurance Plan, in all, more than 40 programs.
>
> With the support of its personnel, the Régie will be applying its expertise to expand the role it plays as a partner in the management and development of the health and social services system. To this end, the Régie intends to help respond to the challenge Québec faces: improving the accessibility of health care and the organization of healthcare services while ensuring their funding within a context of growing needs. http://www.ramq.gouv.qc.ca/en/regie/missorg/mission.shtml

Contrast it to the main objectives stated in the opening of the pre-bill (p. 5):

> 2. The usage of information technologies needed by the health card, the access card and the health summary works towards reaching the following objectives:
>
> 1° To support the offering of health and social services;
> 2° To support the organization of front line services, the deployment of managed care networks and service corridors between organizations;
> 3° To contribute to setting up infrastructures and common services of selective and secure information exchanges;
> 4° To modernize management mechanisms for the public health insurance scheme, the hospital insurance scheme, and prescription drug insurance scheme, and to support the management of the health and social services system.[134] (R. Trudel 2001b)

[134] 2. L'utilisation des technologies de l'information auxquelles font appel la carte santé, la carte d'habilitation ainsi que le résumé des renseignements de santé d'une personne concourt à atteindre les objectifs suivants :

1° Soutenir la prestation des services de santé et des services sociaux ;
2° Supporter l'organisation de la première ligne de services, la mise en place des réseaux intégrés de soins et de services et des corridors de services entre les organisations ;
3° Contribuer à mettre en place des infrastructures et des services communs d'échange sélectif et sécurisé d'information ;
4° Moderniser les mécanismes de gestion des régimes publics d'assurance maladie, d'assurance-hospitalisation et d'assurance-médicaments et soutenir la gestion du système de santé et des services sociaux.

Now, let us look at the mission of the MSSS, again as it appears on their web site:

> The Ministère's mission is to maintain, improve, and restore the health and well-being of Quebecers by providing access to a set of integrated and high-quality health services and social services, thereby contributing to the social and economic development of Québec.
>
> According to this mission, the Ministère's chief role is to ensure the smooth operation of the Québec health and social services system. It sets and applies the priorities, objectives, and policy directions in the health and social services field, with a view to improving the health and well-being of the populace. It establishes health and social services policies and sees to their implementation and observance by health and social services agencies. It also evaluates results according to the goals it sets.
>
> Finally, the Ministère can propose priorities for intervention by state and other actors in order to promote conditions that improve the health and well-being of the populace. http://www.msss.gouv.qc.ca/en/ministere/mission.php

It is important to understand that the MSSS' information systems projects are usually carried out by Sogique, whose mission statement follows:

> As the operational arm for the Health and Social Services Ministry, in terms of informational resources, our mission is to ensure the development and good utilisation, based upon the ministerial orientations, of the information technology portfolio of common interests that are entrusted to us. By information technology portfolio we mean the equipment, IT and data infrastructures, information systems management standards as well as the software applications required for the implementation of a an information technology's communications network, including the intellectual property rights and the right of use attached to it.[135] http://www.sogique.qc.ca/menu/menu_mission_fs.htm

[135] "À titre de bras opérationnel du ministère de la Santé et des Services sociaux, dans le domaine des ressources informationnelles, la mission de SOGIQUE est d'assurer le développement et la mise en

Sogique's mission is not to evaluate the pertinence of a project but to develop it, in accordance with the MSSS' specifications. It would therefore not constitute a proper choice to sit on the core team.

Now very often, when anyone says the words "information system" and "Quebec Government" in the same sentence, links are irremediably made to the GIRES experience (Gestion Intégrée des RESsources – Integrated resources management). The GIRES was supposed to replace over a thousand different software applications used in 138 ministries and public organizations with a single mega system. When the project was launched in 1999, it was supposed to cost $80 million but the bill had exceeded $400 million when it was finally aborted for good in 2003. This means that while the public hearing was going on, the project was still ongoing and the newspapers kept publishing stories about the "bottomless pit" that it had become. This may possibly have tinted the discourse of some protagonists, for instance that of the FMRQ, which based its argument on the government's incompetency in leading large IT projects. Interestingly, contrary to the CpSQ project, GIRES was governed by a consulting firm, EDS. Here is EDS' mission statement, as presented on their web site:

> EDS is a leading global technology services company delivering business solutions to its clients. As the CIO's trusted adviser, EDS provides the best solutions for executives to maximize return on their IT investments. Our deep industry knowledge enables clients to address issues specific to their businesses, and our unmatched global infrastructure provides the

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valeur, à partir des orientations ministérielles, du portefeuille d'actifs informationnels d'intérêt commun qui lui sont confiés. On entend par actifs informationnels les équipements, les infrastructures technologiques et de données, l'architecture technologique et de données, les cadres normatifs ainsi que les applications nécessaires à l'implantation d'un réseau de communication ou d'une technologie de l'information, y compris les droits de propriété intellectuelle et les droits d'utilisation qui y sont rattachés."

> capacity and capability to help ensure we serve our clients extraordinarily well. http://www.eds.com/about/profile/

With the benefit of hindsight, we can affirm that having a professional consulting firm head the project did not really prevent GIRES from being dismantled. Of course, the study of this project would make up a whole different enquiry. Suffice it to say, for the purpose of this thesis, that choosing a consultant to lead the project would have constituted additional initial conditions and appraisals of the object in an arena that was already quite dense. This is obvious considering the divergence between such organizations mission statements and the project's initial objectives. It is therefore uncertain that such an environment would have led to a different outcome.

The government did use the advice of consultants in the matter, but on specific points such as databases centralization and data security. As seen before, the government turned to Cognicase and CGI[136] for guidance in these matters. CGI current mission, as presented on their web site is:

> At CGI, our clients' backroom is our front room. CGI has developed and evolved a comprehensive portfolio of services – including consulting, systems integration, the full management of end-to-end of IT and business functions, and 100+ proprietary solutions – to serve as clients' full-service provider in improving all facets of their operations. As a result, clients can turn their full attention to better serving their customers' needs. http://www.cgi.com/web/en/overview.htm

Whereas Cognicase outline was taken from an annual report:

> Since 1992, COGNICASE has been using technology to meet business needs by designing and implementing advanced applications and

[136] Two independent consulting firms at the time, but CGI bought Cognicase in 2003.

> electronic solutions. We are known for our expertise in processing services and financial products, enterprise resource and relationship management, government processes management, consulting and systems integration. Our continued growth is based on our ability to understand market needs and to adapt based on those needs. We offer our solutions in application service provider (ASP) mode and via outsourcing to meet our clients' performance and profitability requirements.
>
> Our in-depth knowledge of business processes enables us to help companies of all sizes to increase their market share, reduce their costs and increase their revenues. We establish true partnerships with our clients in all key sectors of the economy. We believe in being flexible, rigorous and proactive. We aim for and achieve concrete measurable results. (Cognicase 2001, p. 1)

Although not officially enrolled in the debate, both CGI and Cognicase participated indirectly, since their opinions were quoted by the Minister several times. Remember that these consulting firms were arguing for data centralization because it would make it more secure. Could these recommendations not follow directly from these firms' specific expertise with ASP and outsourcing, or one or more of their proprietary solutions?

Now, interestingly, there exists another governmental agency whose mission is much closer to what would be needed to lead the current project, the Agence d'évaluation des technologies et des modes d'intervention en santé (AETMIS – The Québec government agency responsible for health services and technology assessment).

> [AETMIS is] an independent organization that reports to Québec's Minister of Health and Social Services. Its mission is to advise the Department and to support, by means of assessment, decision-makers in the Québec healthcare sector. Its assessments focus on the introduction, acquisition and use of health technologies, and on the methods of dispensing and organizing services.

> Promoting assessment, transferring knowledge, training and outreach activities are also at the heart of its mission. http://www.aetmis.gouv.qc.ca/site/en_declaration.phtml

A newspaper article published in September 2001 reports that the government does not believe that AETMIS has the mandate to evaluate the CpSQ, because it is only responsible for the evaluation of techniques and equipment directly related to care. Then quoting a press agent for the Health Minister, it adds: "The smart card, it is an administrative tool, it does not contribute to improve health but to improve the administration of the health system." And later in the same article, we learn from the President and CEO of AETMIS that the organization's mandate had been broadened in June of 2000, and that evaluating an innovation such as the health smart card was now clearly part of its mandate, which now encompassed the evaluation of procedures and organizational support systems. (Dutrisac 2001, September 1)

Two suppositions can be drawn from this newspaper article. First, that the government is not consistent in its assessment of the CpSQ project. Although it is trying to sell the idea that its main objective is to provide better health care, it is far from evident that this "discourse" is circulating inside the government and the slip made by the press agent is but one example of this. Second, the government voluntarily dismissed AETMIS because it was not ready to hear their conclusions. As mentioned before, they were pursuing a smart card fantasy and they were not ready to see it fade away just yet.

Usually, when we talk about a public consultation, we are outside the realm of organizational secrecy. However, with its willingness to hide many documents and

crucial information before the hearing, and with its decision to leave an agency such as AETMIS out of the project, the government completely lacked transparency and as such, operated exactly as if it were a private organization. When dealing with such a large system that has an impact on so many different stakeholders, moreover, a system that should be used on a voluntary basis in the end (by both the physicians and the patients), acting as such creates a risk that should not be taken by responsible government bodies.

Can this Story Inform the Private Sector?

Some of the issues that arose from this project had not been foreseen, since no references to them had been found in the literature. Basically they are the opting-out method, the fragmented consent opportunity and the dual finality of the IT. Do these issues also exist in the private sector? If so, are they ignored or dealt with differently? If not, does this absence presuppose that our systems are less complete than those from the public sector without our acknowledging it?

Once again, I will borrow from Latour's ideas to answer this question. Everything is everywhere but in a latent state waiting to surface at the first occasion. What forms such an occasion? The association of two or more (human and non-human) actants to form a network. For instance, a citizen who is tired of receiving phone calls from window cleaners in the middle of dinner may now ask for his/her phone number to be removed from most telemarketers calling lists provided that they know that this governmental service is now available in Canada (since September 30, 2008), and that

they need to register on the National Do Not Call List at www.lnnte-dncl.gc.ca. Some individuals may not be interested in opting-out of telemarketers' lists even though the possibility now exists, while others may have been eager to do so way before the service was offered in Canada. In such a case, the opposite situation (voluntary opting-in) is difficult to imagine, as it would require individuals to register their name on each telemarketers' list that interests them.

Another topic, still in marketing, that is currently fostering an opting-out vs. opting-in debate is email appending, i.e., the process of adding email addresses bought or rented from service providers to the postal addresses in our records. The opt-out method is used when a clickable link is provided at the end of an email to notify the sender that the recipient wishes to receive no further e-mails. Unfortunately, clicking on the link has the side effect of confirming that the email address is valid, perhaps opening the door to further unsolicited e-mail or spam. The opt-in method is used when a company makes sure that the people whose e-mail addresses were matched and who are therefore about to be sent publicity really want receive it, hence boosting list quality.

Opting-in or out of a database seems to be common in marketing, but more unusual in other areas. In most situation, refusing to produce data (or to the least, refusing to have data included in a database) should immediately prevent service provision. Just think about a bank, a video store, or even a garage. The opting-out method is not even considered in these environments, as their databases are usually meant to support their core business activity.

The fragmented consent opportunity also made many waves during the public hearing and this notion is even more difficult to apply to other types of systems than the opting-out method. Basically, for instance, this would entail that a customer at a video store could choose to have only his rental information stored in the database in function of the type of movie he is renting. Although this might possibly serve the purposes of some clients, this system would not be deemed reasonable for most organizations. This could even be seen as fraud if, for instance, one were to ask a garage mechanic to record all the routine maintenance jobs performed on a car, but to omit repairs due to serious damage so as to maintain a high resale value. In the extreme, it can become a problem of IT governance, like what happened a couple of years ago all around America with "zappers," the common name for automated sales suppression devices used by restaurateurs to tamper with the totals on their tills in order to create non-taxable income. The situation is slightly different here, as it is the user, and not the client, who is using discretion with regard to what data will be stored or not. Still, it results in unreliable data storage in the database and goes against usual principles of system design methodology found in the private sector.

Finally, the dual finality of the system refers to the idea that the card would have had both an administrative and a clinical purpose. Many examples of such a duality exist in the private sector and it is often an extension of the system that had not been anticipated by the users at the project's outset. A common illustration of this would be the use of the information coming from the scanning device to measure a cashier's speed at the grocery store.

Summary

The private and public sectors are two different fields, i.e., they have distinct logics and different types of capital at stake. It is well accepted that in the private sector, large IS projects must be planned thoroughly. In this chapter, it was shown that the public sector seemed to lack such planning abilities as the current project did not show any sign of it. I contend that it is in most part due to the difficulty in matching the objectives of the project to the mission of the organization responsible for the planning. As such, the government should seriously consider offering a place of choice to AETMIS in any further iteration they make of their provincial health information infrastructure. On top of providing the government tremendous expertise, this agency would probably add a lot of credibility to the project and reduce the level the anxiety, if not the paranoia that was felt by many stakeholders towards the idea of having the RAMQ steer the project.

Discussion and Concluding Remarks

CHAPTER FOURTEEN

Lessons learned, statements, implications and limitations

BECAUSE we want the lessons learned during this research endeavour to appear clearly to the reader, we followed the more traditional way of offering propositions, just like Pushkala Prasad did in her 1993 article published in AMJ. I am conscious that this is not typical of Bourdieuian or Latourian papers and that I am being pragmatic. Yet for the sake of consistency with the Latourian view, my propositions will be called statements instead, since ANT gives a different meaning to the former term. The research questions are repeated here in order to frame the discussion.

Lessons Learned and Statements

Statement #1

How did the process of initiating a provincial health information infrastructure unfold in Quebec?

In this thesis, the story about the CpSQ was recounted four times. While the first version presented somewhat of a "neutral" view of the situation, the three following

ones allowed us to "observe" the situation from different panoramas and therefore to engage with the story in several ways. One can say that these four accounts of the same controversy gave the latter dimensions. A first important learning coming from this research thus concerns the notion of overdetermination.

Overdetermination is a concept that was first developed by Sigmund Freud in psychoanalysis. He used it to interpret dreams, as for him dream features were always caused by multiple factors in the life of the dreamer, they were overdetermined (Freud 1999). The notion has been borrowed by many other disciplines since then, where it always means more or less that an effect is determined by multiple causes.

During my journey studying the CpSQ corpus, I was asked many times: "So, why did it fail exactly?" There had never been a straightforward answer to this question and now, retrospectively, it is easier to see why. Part of it had to do with policy, another with rights, and yet another with technology... And no, it was not necessarily a failure as some people ended up very glad the project aborted (and thus for them it was a success after all). Among these many reasons, any one alone could have led to a similar outcome but in the present case, everything was intermingled, adding to the confusion.

The fact that the situation is overdetermined does not pose a problem for ANT. In fact, ANT is even an ideal tool to study such complexity since the theory does not care about how big a controversy is; it simply considers the network to be longer. Whenever a controversy is still unstable, this is even truer. For instance, different

actor-networks gather around specific goals and objectives and evolve in parallel towards the achievement of a greater (or ultimate) goal. If the controversy stops at that point, it is difficult to know for certain who accounted for the stabilization, it could be either three or a mix of them all. However if the controversy carries on, so that the parallel actor-networks associate with one another this time possibly around an ultimate, yet revised goal (cf., Step 3 of Latour's Mediation as Black Boxing model on p. 244) As such, the world's appraisal with ANT is somewhat like a fractal, i.e., a situation can either be broken down in many reduced-scale copies of the whole, or it can itself be a reduced-scale copy of a greater whole. This is the beauty of the net analogy as seven nodes linked together make a net and seven nets linked together also make a net, just a more expanded one. As seen earlier, there is no prescribed place to start an ANT analysis. In the present thesis, trivial words were often the departure points as they were conveying all the weight of their network with them: democracy, rights, and databases are three recurrent examples of this.

Considering this, I pull from that study a first statement:

In complex situations where outcomes are overdertermined, ANT is a useful theory because it allows us to study both the whole and the parts (or the "meta-whole" for that matter) with the same set of tools. It also encourages us to linger over trivial words in order to describe a situation as it was really experienced by the participants.

Statement #2

Why did the project unfold as it did?

It was shown in this dissertation that one of the greatest problems with the CpSQ was the number of different groups and associations it mobilized. This was exacerbated by the fact that each and every one of these groups and associations was aiming at a different set of objectives. The strategy literature uses the term "pluralism" to quality such situations. According to Denis, Langley and Rouleau (2007), a pluralist context is an organizational context defined by three main features: multiple objectives, diffuse power and knowledge-based work processes. These authors specifically include hospitals (along with universities and art organizations to name a few) in that category. In light of this, one can say that the project studied here is even more complex than the pluralist context since it brings together several pluralistic organizations.

It is argued in Denis et al. (2007) that conventional conceptions of strategic decision-making are not appropriate to study pluralist contexts and that alternative theories such as ANT, Conventionalist Theory (e.g., Boltanski and Thévenot 2006) and Social Practice Theories (e.g., Giddens 1984) are more suitable to the task. Within the MIS field, our theories have not been modified to embrace pluralist contexts even if many studies are conducted in hospitals and other generally accepted pluralist contexts.

The present thesis makes a similar attempt, also using ANT but Pierre Bourdieu's theory as well. To this effect, one can note that Luc Boltanski was initially a student

of Bourdieu who is now letting go of the more structural constraints imposed by a strict application of the ToP, and rather sees the world as an interweaving of multiple social orders (Boltanski and Thévenot 2006). This is very close to what was done in this research, as the ToP was used in a very flexible manner in order to frame panoramas. Finally, the paper by Denis, Langley and Rouleau refers to Giddens (1984) as an example of Social Practice Theory. In this dissertation, at the end of chapter three, I made a demonstration to the effect that Giddens' structuration theory and Bourdieu's ToP were quite similar in essence, so I am definitely in sync with these authors. However, while Denis and his colleagues simply aimed at exploring the usefulness of theoretical frames (theory development effort), I rather used them to inform a real situation (empirical testing). There follows a second statement:

Just as for strategy theorists, pluralistic organizations (or inter-organizations?) present a complex challenge for MIS theorists and practitioners as most conventional models used within our discipline are not tailored to situations where multiple (often opposed) objectives are sought. Alternative theories such as ANT and ToP can help MIS researchers to make sense of the events and to better explain the historical reasons at the basis of behaviours and/or outcomes.

Statement #3

What can we learn from this situation in relation to behaviour towards change, the outcome of participation activities and more broadly, the implementation of interorganizational systems containing personal and sensitive information?

It was mentioned above that models in our discipline were not tailored to study pluralism. This is because many of them tend to assume away pluralism (Denis, *et al.* 2007). However, a tendency to embrace pluralism was observed in more recent theories. For instance, Lapointe and Rivard (2005) acknowledge that their resistance to change model must be cross-level in order to reflect adequately most situations, this is definitely a step in the right direction. So is the decision by Markus and Mao (2004) to include the notion of "stakeholder" instead of the most usual "user" in their emergent causal processes model of IS participation. However, one important learning stemming from the present study is that the picture can be much larger than the one we admit to see at first glance. In opposition, researchers often have a propensity to oversimplify situations with a "one theme-one model" reductionist mental scheme. It ensues that the situation is never looked at holistically and this has a definitive impact on the coherence of the research results.

Using alternative theories such as ANT and ToP can help in dividing the story in more digestible sub-stories without ever breaking the link to the whole. Contrary to the usual boxes and arrows models, this is not a reductionist way of doing research. For the sake of the academic exercise though, a demonstration was made in chapter twelve that it was possible to merge several models into a more comprehensive one.

Of course, the result is not as encompassing as a study made with ANT or the ToP, but I believe it is an important refinement to our understanding of MIS implementation situations. The following statement summarizes this learning:

If we want to gain more hindsight from MIS implementation projects occurring in pluralist contexts, we must perform research in a more holistic manner. Borrowing theories from sociology is one way to tackle this task, but it is also possible to refine our conventional models so that they become more flexible and encompassing.

Limitations and Recommendations for Future Research

Although the research approach at the basis of this study was one of its strengths, since it did not direct the participants' answers in any particular direction, it also constituted one of its main limitations as there is always a chance I misinterpreted many of the things I read. I certainly hope the former has precedence over the latter yet for future research, it would be a good idea to complement rich secondary data such as the one that was available for this study with observations and interviews. This is something I myself intend to do to study the ongoing Quebec Health Record project.

Another limitation stems from the fact that there is no point of comparison for the Quebec project that allows us to contrast our findings. A comparative case study design would have definitely provided additional learning; unfortunately, there was at the time no other case that could have been studied as thoroughly as the Quebec

project, with a similar research approach (secondary analysis). Recently, I came across documents explaining the London EHR project, which seem to be one leg of the greater provincial health information infrastructure that is being built in Ontario. Considering the very different path Ontario is taking to ultimately arrive at the same end (i.e., building city-wide, than regional, than provincial infrastructure), this is also something worth investigating in future research.

Epilogue

CHAPTER FIFTEEN

How do ToP and ANT relate to this thesis?

AT the inception of this project, I was really inspired by Pierre Bourdieu's writings and I wanted to conduct a Bourdieuian analysis of the Quebec Health Smart Card project. For quite a long time, I admit, I thought I would be able to neatly match positions to position takings. So I derived categorical variables from my N*Vivo codes and found from public sources some basic demographic variables about the groups that participated to the public hearing (distribution male / females, average age, average salary). My goal was to perform correspondence analyses, a statistical procedure cherished by Bourdieu that was explained thoroughly in my proposal. I realized very rapidly though that things were not going to be so easy. First, I was dealing with too much missing data since I had not been able to find demographics for every group. Second, my categorical variables were somewhat inferred from sentences coded in N*Vivo where they were not so dichotomous after all. It ensued that the ideal SPAD[137] output never came and that I had to let go of correspondence analyses in this dissertation.

Was I disappointed? Of course I was. But Bourdieu's social praxeology had also taught me to bracket pre-constructions and, most of all, to direct a special attention to words. It is in putting this advice into practice that I started shuffling things

[137] The statistical program I was using for conducting correspondence analyses.

differently. As mentioned earlier, strong and recurring words such as democracy and rights caught my attention and offered me a different perspective (or rather perspectives) on the story. At first, I divided the story into four parts: political, economic, welfare and IT/IS. When I later started to reflect upon the main capital at play in each field and the principal stakes of the participants, it became clear that political and economic were very closed and I decided to merge the two.

Because I had not been on the field and was working solely with secondary data, objectivity of the second order was not easy to achieve as the square table of pertinent properties on pp. 124-5 in this thesis shows. At this point, I was stuck and I knew I needed to complement Bourdieu with another theory to finish my thesis. I was about to embark into critical discourse analysis when I was made aware of an upcoming conference by Bruno Latour right here at HEC. Seeing and hearing him talk was a revelation to me. That and a book[138] surreptitiously left in my possession by my advisor one week later with the request to read one chapter in the middle of it! This was not knowing me, or rather knowing me too well. I started the chapter and after a couple of pages, went back to page one to read the full book. Because I do nothing half way, it seems, I also bought the French version the following week and reread the whole book for a second time. The magic had happened.

After having read two other books and several articles in no time, I was then ready to add a Latourian flair to my thesis. Not only was ANT fascinating, I thought, it was reinforcing my decision to frame my thesis around three perspectives of the same

[138] Latour, B. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*, Oxford University Press, 301 p.

story and was preventing me from using critical discourse analysis, a technique that seemed interesting and adequate but one step further from usual MIS applications, and I was already drifting from the core using Bourdieu.

To use somewhat of a *cliché*, Latour really allowed me to "think outside the box", or in the present case, outside boxes and arrows. By targeting my attention to events, sentences or even words that appeared mundane at first, I was able to perceive things that would have been let aside, had I been using usual MIS models. For instance, I would have probably used the Lapointe and Rivard model with a serious number of variables and arrived at a conclusion that the situation illustrated a contingency based upon the particular context that I would then characterize in some fashion. But although the context was the same for every participant (after all, the CpSQ occurred at the same time, at the same place, in the same environment for everyone), there were clearly (to me anyway) three stories emerging. Something had to be different somewhere.

I believe the fact that context does not exist in ANT but simply reflects an expansion of the actual network (see p. 93 of this thesis) really helped me to understand the situation differently, to think it through outside the box. And again, this brings me back to Latour's ontological belief, i.e., there is more than one reality and each of these change over time as a result of associations forming and dissolving over time. If we want to depict this reality graphically, we have to allow for several occurrences of the model to be illustrated in parallel (multiple realities), and we also need to allow for several iterations to occur in each occurrence (changes over time). This is what I tried

to achieve in chapter twelve, a chapter that would never have been written in that way, had I not encountered Bourdieu and Latour and used their wise precepts to make sense of my corpus and finish this dissertation.

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