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Two Philosophical Issues Surrounding the Structure of Public-Policy Recommendations[†]

Marc-Kevin Daoust and Victor Babin

Département des enseignements généraux, École de technologie supérieure, Montréal, Canada
Corresponding author: Marc-Kevin Daoust; E-mail: marc-kevin.daoust@etsmtl.ca

Abstract
One of the key responsibilities of public institutions in liberal democracies is to formulate recommendations for decision makers. However, public institutions realize that decision makers will often partly ignore their recommendations. This situation of "partial compliance" with recommendations raises a number of philosophical issues for institutions. Based on an analysis of 570 recommendations drawn from 40 Quebec public-sector documents and reports, we identify two issues surrounding the structure of public-policy recommendations.

Résumé
L'une des fonctions des institutions publiques des démocraties libérales est de formuler des recommandations à l'attention des décideurs. Or, les institutions publiques savent que leurs recommandations seront souvent ignorées en partie par le décideur. Cette situation de « conformité partielle » aux recommandations soulève plusieurs problèmes de nature philosophique pour les institutions. En nous appuyant sur une analyse de 570 recommandations tirées de 40 documents et rapports du secteur public québécois, nous identifions deux enjeux entourant la structure des recommandations issues du secteur public.

Keywords: ideal theory; ideal approximation; advice; separability; public policy; recommendations

Introduction

Imagine the following situation. You are a policy advisor at the ministry of justice of a Canadian province. Over the past months, you have been coordinating a working committee made up of scientists and ethicists. The mandate of the working committee is to issue a report on the use of artificial intelligence in the field of justice. You are responsible for drafting the document. The last section of the report must include

[†] This article is part of the *Dialogue* series "Projet Babel Fish," in which we print a paper in English alongside a version in the author's native language. This is a translation of "Deux enjeux philosophiques entourant la structure des recommandations issues du secteur public," which is available here: doi:10.1017/S0012217323000227.

recommendations for the minister of justice. Here are two recommendations that the committee would like to put forward:

1. Conduct a pilot project on the use of artificial intelligence in parole processes.
2. In all judicial processes, prioritize artificial-intelligence systems that are explainable (that is, artificial-intelligence methods that allow users to understand how the algorithm operates and arrives at its results).

This isn't the first time you've prepared a document for a minister. In your experience, ministers rarely implement *all* recommendations made to them. For various reasons, whether political, social, or economic, recommendations are often met with *partial compliance* — that is, some recommendations are not implemented, and others are only partially instituted.

Should you include these two recommendations in the document? On the one hand, if the committee considers these two recommendations to be "optimal" (that is, good, desirable, ideal, or preferable), then making these recommendations seems wholly justified. It's difficult to see why one would appoint experts and advisors to make bad recommendations to ministers. If we value the opinions of experts in public-sector decision making, it's because experts tend to come up with good recommendations. On the other hand, you know that ministers generally only partially comply with recommendations made to them. So, it's possible that the minister will act on the first recommendation but ignore the second one. A totally opaque algorithm could thus be used in the pilot project on parole processes, which would raise several serious ethical and political problems.[1] That's why you fear the consequences of partial compliance with these recommendations. You tell yourself that it might be preferable to make recommendations that take this reality into account.

This kind of situation is commonplace for policy advisors. Institutions must make recommendations to decision makers, knowing all the while that their advice can be ignored. Partial compliance with recommendation statements raises several interconnected philosophical problems, notably the following ones. Should policy advisors be sensitive to the fact that decision makers rarely pass into law all recommendations made to them? If so, how should this sensitivity manifest itself? Should policy advisors adjust their recommendations to avoid making recommendations that will probably be ignored? To what extent does the rejection of one recommendation affect the other recommendations? For example, are certain recommendations "inseparable" from one another?

Few strictly philosophical studies aim to elucidate these problems. Of course, there is a detailed literature on the formulation, recommendation, and evaluation of public policies. That literature, however, focuses on issues such as political agenda setting relating to programs,[2] the actual capacity of public policies to solve complex social problems,[3] effective communication of recommendations,[4] methods for evaluating

[1] Consider the problems described by Jocelyn Maclure (2021), for instance.
[2] See Knoepfel et al. (2015, Chapter 6).
[3] See Rittel and Webber (1974), Head (2008), Head and Alford (2015), and Dunn (2015, Chapter 4).
[4] See Dunn (2015, Chapter 9) and Bromell (2017, Chapter 5).

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public policies,[5] rules of argumentation for policy advisors,[6] and value creation.[7] There is also a body of literature on workplace ethics for scientists working as advisors in public service. However, these studies look mainly at issues surrounding values in science,[8] risk management,[9] and the place of public participation in the development of public policy.[10] The phenomenon that interests us is distinct from these classic problems surrounding public policy. We are interested in the interactions between different recommendations and in ways to take these interactions into account in the formulation of recommendation statements.

In light of the foregoing, this article has two major objectives. The first objective is to document the types of interactions that can be observed between different public-policy recommendations. To this end, we analyze recent recommendations formulated by four Quebec public bodies: the Bureau du coroner (coroner's office, BC), the Commission de l'éthique en science et en technologie (commission for ethics in science and technology, CEST), the Commission des droits de la personne et des droits de la jeunesse (human and youth rights commission, CDPDJ), and the Protecteur du citoyen (Quebec ombudsman, PC). In total, 570 recommendations resulting from 40 reports and documents were analyzed.[11] The second objective is to carefully identify different philosophical issues raised by our observations. We have identified two philosophical issues related to the formulation of recommendations. The first concerns the inseparability of different recommendations; the second concerns the stability of recommendations made by institutions.

In Section 1, we present an overview of our observations. In Section 2, we explain the issue of recommendations' separability. We go on to describe the issue of their stability in Section 3. Finally, Section 4 opens up some avenues for future reflection aimed at solving the problems identified.

As we shall see, our observations are of practical value. They allow us to better assess certain strictly philosophical problems around formulating recommendations. In democracies like ours, recommendations that public institutions provide to decision makers are central to good collective decision making. In that respect, the identification of philosophical issues surrounding these kinds of recommendations is a first step toward improving public-policy decisions.

1. The Language of Public-Policy Recommendations in Quebec: A Selected Overview

In this section, we describe the types of interactions that can be observed between different public-policy recommendations. Our observations are based on an analysis of four Quebec public or parapublic agencies. These bodies have distinct orientations and objectives, whether to prevent deaths (BC), to set out guidelines for advancements

[5] See Paquin et al. (2011) and Knoepfel et al. (2015, Chapter 10).
[6] See Dunn (2015, Chapter 8) and Godden and Wells (2022).
[7] See Paquin et al. (2011) and Bromell (2017, Chapter 3).
[8] See Tholen (2017, Chapter 1) and Lees-Marshment et al. (2020).
[9] See Tholen (2017, Chapter 4) and Frank (2019).
[10] See Jacquet and van der Does (2021).
[11] A list of the 40 documents and expert opinions is presented in the supporting document.

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in technoscience (CEST), to help ensure that the charters of rights and freedoms are respected (CDPDJ), or to maintain the integrity of public services and ensure their improvement (PC).

1.1. Overview of the Corpus of Material and Methodological Remarks

To define our corpus of material, we selected the above-mentioned agencies' 10 most recent publications that contained at least four recommendations. For each one of these documents, we carried out a set of analyses. First, we performed a full-text search by keyword to check whether the document explicitly mentioned the issue of whether its recommendations were realistic or applicable. Next, we looked in more detail at the format of the recommendations. How are the recommendations presented? For example, how are they grouped? We were then able to detect clear interactions between recommendations. The following sections present the results of these analyses.

1.2. The Place of "the Ideal" and "the Real" in Recommendation Statements

Upon analysis, we found comments about how realistic or applicable the proposed policies were in 19 of the 40 documents analyzed, or in 47.5% of cases. Most of these occurrences were found not in the recommendation statements, but rather in the main text of the report. The semantic field around the notion of feasibility is very broad: measures are said to be too *idealistic*, one is confronted with *constraints* or *limits*, actions are described as *realistic* or *practicable*, policies may be *ineffective*, and so on.

To illustrate how the issues of "what's realistic" and "what's applicable" present themselves in the reports we analyzed, we can take two simple examples. First, consider a recommendation made by the CEST in the position statement entitled *Genetically Modified Babies: Ethical Issues Raised by the Genetic Modification of Germ Cells and Embryos*:

> The Commission recommends that the Gouvernement du Québec include these application[s] in the State-funded healthcare basket, *provided that the agency responsible for assessing the technologies finds that the cost-benefit ratio, the opportunity cost and the budgetary impact are all acceptable*. (Commission de l'éthique en science et en technologie, 2019, p. 16; our emphasis)

The feasibility of implementation is not implicitly assumed in this recommendation statement. As a matter of fact, one can deduce that, by specifying that this recommendation applies only "provided that … the cost-benefit ratio, the opportunity cost and the budgetary impact are all acceptable," the advisors who prepared this report are concerned about whether their recommendations are realistic and applicable (Commission de l'éthique en science et en technologie, 2019, p. 16). The main text of the document offers a justification of the above qualification: "Since resources are limited and needs are potentially unlimited, decisions must be made about priorities" (Commission de l'éthique en science et en technologie, 2019, p. 15).

In the *Rapport d'investigation du coroner concernant le décès de Carl Boutin* [Coroner's investigative report concerning the death of Carl Boutin], the coroner

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Kathleen Gélinas explicitly mentions considerations of whether the recommendations she puts forward are realistic and applicable. However, unlike the previous example, here we find the reference not in the recommendation statement itself, but rather in the section devoted to analysis:

> While this study [by Professor Jaeger] recognizes the fact that it is *unrealistic* to fence an entire road network, it methodically explains how to identify the most dangerous roads and what mitigation measures to put in place. This study also demonstrates that fences are a good bet, as much for the protection of wildlife as for the security of motorists. …
>
> The fact that this study of international scope looks specifically at a road segment in Quebec gives me reason to believe that the solutions it proposes are *applicable* to the territory of Quebec and thus warrants a reexamination of the way we do things. (Gélinas, 2021, p. 5; our emphasis)

Use of the terms "unrealistic" and "applicable" is a good indication that practicality was a concern in the drafting of these recommendations. In this particular case, it appears clear that a feasibility check was made to ensure that the stated recommendations could actually be carried out by the decision maker.

1.3. The (Numbered) List as the Standard Format for Presenting Recommendations

In the documents we studied, all of the recommendations were presented in list form: the coroner's office used bulleted lists, and all the other agencies used numbered lists. There are numbered lists of recommendations in the executive summaries of reports published in the public sector. However, possible interactions between different items on a list are rarely mentioned. In the 40 reports and documents that we consulted, there was only one mention of possible interactions between different recommendations.[12]

Resorting to a numbered list (without mentioning the different possible interactions among the items on the list) is not trivial. This way of presenting recommendations to the decision maker does not account for possible interactions between the recommendations in a report. Let's look at an example that's easy to understand, taken from the literature on sustainable development. The city of Kalundborg in Denmark has an imposing industrial zone that includes, among other things, a coal-fired power plant, a refinery, a cement factory, fish farms, and the like (Ehrenfeld & Chertow, 2002; Ehrenfeld & Gertler, 1997). Taken individually, the industries operating in Kalundborg are extremely polluting. Nonetheless, Kalundborg's environmental record is positive overall.

The environmental success of Kalundborg lies in the fact that these industries are organized into a system. For example, the wastewater discharged by the refinery is upcycled at the coal-fired power plant, the ash emitted by the coal-fired plant is used as an input at the cement factory, and so on. Taken individually, these industries

[12] See Protecteur du citoyen (2018a).

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operating in Kalundborg would be extremely polluting, but their organization into a system works to reduce their environmental impact.

It is difficult to express the results of Kalundborg's wise decisions in the form of a numbered list of recommendations. For example, take the following list:

1. The city should have a coal-fired power plant.
2. The city should have a refinery.
3. The city should have a cement factory.
4. The city's industries should cooperate amongst themselves so that the outputs of one industry become the inputs of another.

None of these recommendations is meaningful on its own. For example, if we moved forward on the first three recommendations but ignored the fourth, we would be committing a serious environmental blunder. Similarly, the fourth recommendation is fully meaningful when there are a certain number of industries in Kalundborg that can be connected, hence the importance of the first three recommendations. Simply put, these recommendations are meaningful when they stand together. They are inseparable. However, the numbered list does not allow us to account for important interactions between recommendations. On the contrary, the numbered list *separates*, or *isolates*, the recommendations from one another.

1.4. Implementation Interactions Between Recommendations

In the simplified example of Kalundborg presented above, different recommendations interact with one another. We wanted to better document the different types of interactions that can be observed among recommendations in a given report. The interactions that interest us can be divided into two large categories:

1. **Implementation Interactions.** Two recommendations are said to interact with one another on the level of implementation when the implementation of one makes the implementation of the other possible (or impossible). For example, if it is impossible to set recommendation 1 in motion without also adopting recommendation 2, then there is an interaction between these recommendations as concerns implementation.[13]
2. **Effects Interactions.** Two recommendations are said to interact with one another on the level of effects when the implementation of one changes the effects of the other. For example, if two recommendations have a combined effect greater than the sum of their individual effects, then there is an interaction between these two recommendations as concerns their effects.

Let's look at the implementation interactions first. The type of implementation interaction that we studied is *complementarity*. Two recommendations are said to be complementary when the implementation of one leads to the at least partial

[13] Note also that an implementation interaction can be unidirectional, which means that recommendation X can make recommendation Y possible without the inverse being true. Thanks to an anonymous reviewer for pointing this out.

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implementation of the other. The opposite of complementarity is *incoherence*, which is the interaction that occurs when the implementation of one recommendation makes the implementation of another impossible. We did not observe any instances of incoherence. Thus, we will focus only on complementarity.

We found complementarity in 21 of the 40 documents analyzed, or in 52.5% of documents. It appeared most frequently in reports by the BC and in the position statements by the CEST: complementarity was present in 70% of publications by these bodies. It appeared least frequently in documents by the CDPDJ — in 30% of publications.

For a good illustration of complementarity, we can take an example from the position statement by the CEST entitled *La ville intelligente au service du bien commun : lignes directrices pour allier l'éthique au numérique dans les municipalités au Québec* [The smart city in the service of the common good: Guidelines for allying ethics with digital technology in Quebec municipalities]:

(R-12) That municipalities be required to create and maintain an inventory of their information assets.

(R-13) That municipalities be required to adopt and implement a framework for managing these data and their use. This framework should contain

- a description of the types of data collected and stored, the quality of the data, and the size of these data sets;
- a governance framework that sets out the division of responsibilities and the structures put in place for ensuring that the management of data is responsible;
- the authorized methods for gathering data;
- the authorized uses of these data, including use by outside third parties, if applicable; and
- any other relevant information (Commission de l'éthique en science et en technologie, 2017, p. 49).

To assess whether we are dealing with a case of complementarity, we must determine whether the implementation of one of the recommendations necessarily leads to the at least partial implementation of the other. The two recommendations above show a certain degree of complementarity because it is impossible to implement recommendation 13 without at least partially implementing recommendation 12. Indeed, to be able to arrive at "a description of the types of data collected and stored, the quality of the data, and the size of these data sets," we have to be acquainted with these sets (Commission de l'éthique en science et en technologie, 2017, p. 49). Thus, an inventory of the city's data must be created, which is what is advised in recommendation 12.

1.5. Effects Interactions

Now let's turn to effects interactions. Basically, this type of interaction happens when different recommendations have a combined effect that is greater or less than the sum

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of their effects taken individually.[14] We observed that this type of interaction was clearly present in 17 of the 40 documents analyzed, or in 42.5% of the documents.

To better understand this type of interaction, let's look at an example of synergy in the Quebec ombudsman's report entitled *The Consequences of the Increase in Intermittent Sentences in Québec Correctional Facilities*:

> R-1 **That** the Ministère de la Sécurité publique ensure that correctional facilities that house people with intermittent sentences give them, at their first admission, documents concerning:
>
> - their rights and obligations;
> - the procedure for access to their prescription medication;
> - a list of authorized personal effects;
> - the steps for obtaining a temporary absence;
> - the information for reaching *a reintegration contact* within the correctional facility who takes calls during the week (see R-10);
> - *a list of reintegration programs in the region.*
>
> …
>
> R-12 **That** the Ministère de la Sécurité publique and the directors of the correctional facilities concerned *develop a slate of services, programs or workshops to foster social reintegration* and prevent the recidivism of people handed down intermittent sentences. (Protecteur du citoyen, 2018a, pp. 32–33; our emphasis)

To determine whether these recommendations are synergic, we need to assess whether the sum of the respective effects of recommendations 1 and 12 taken individually is less than the effect of their combined implementation. Let's look at the example above more closely. If the desired effect is better social reintegration for people serving intermittent sentences, then providing a list of reintegration programs when these programs don't exist does absolutely nothing to help the situation. Conversely, creating social reintegration programs tailored for those who have received intermittent sentences, but without providing some mechanism that would point them toward these resources would also have a negligible effect. So, it's when the two measures are combined that the effect is noticeable.

1.6. Summary of Important Points

Let's take stock. We analyzed 570 recommendations drawn from 40 documents produced by four Quebec public-sector agencies. In examining these documents, we focused on the consideration given to issues of what is realistic and applicable, the presentation format of the recommendations, and the occurrence of interactions between recommendations.

[14] The three types of interaction that fall into this category are *synergy*, *substitution*, and *mitigation*. For a more detailed study of these interactions, see Daoust and Babin (2022).

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As far as what is realistic or applicable goes, we observed that a little less than half of the documents in our corpus explicitly mentioned these issues. As for the presentation of the recommendations, we observed that all of the documents in our corpus relied on either numbered lists (75%) or bulleted lists (25%). This way of organizing the recommendations makes it impossible to account for interactions between them. Finally, we observed effects interactions in 17 of the 40 documents in our corpus. We observed implementation interactions in 21 of the 40 documents in our corpus.

The following sections help to better understand the philosophical implications of these results.

2. The Issue of Inseparable Recommendations

The observations made in Section 1 raise at least two ethical problems around the formulation of recommendations in the public sector. Sections 2 and 3 tackle these issues.

The first issue concerns the inseparability of recommendations. The notion of (in) separability comes from the mathematical theory of optimization. When the functions of several variables are mathematically separable, it is generally easier to identify each function's optima.

For example, suppose that you must optimize a function F_1 that is dependent on two variables (a and b). Suppose further that F_1 may be expressed in the following way:

$$F_1(a, b) = F_2(a) + F_3(b)$$

As we can see, F_1 may be expressed as the sum of two distinct functions, each of which is dependent on one variable. $F_1(a, b)$ is simply the sum of two distinct functions: $F_2(a)$ and $F_3(b)$. In technical terms, we would say that F_1 is *additively* separable. That means that the optimization problem of F_1 can be treated as two separate problems: how to optimize the value of a in function F_2 and how to optimize the value of b in function F_3. Moreover, the way in which we optimize variable a in function F_2 doesn't affect in any way how we would find the optimal value of b in F_3.

Some functions of multiple variables cannot be separated in this way. When the variables of a function are not separable, then we need to take into account the different interactions between our variables to optimize that function. Generally, the result is that it becomes more complicated to identify the function's optima.

The question of whether the variables of a problem are separable or not is an important one in many theoretical fields. This can be illustrated by way of the following examples. The separability of particular variables is important in the economics literature on the theory of the second best (Lipsey & Lancaster, 1956; Wiens, 2020). According to R. G. Lipsey and Kelvin Lancaster (1956), if not all of the conditions for an ideal allocation of resources can be satisfied, it may be harmful to satisfy those that can be. Following Lipsey and Lancaster's observations, economists and philosophers have now understood that problems surrounding the

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theory of the second best are directly tied to the question of whether the variables of the functions being optimized are separable from one another or not (Blackorby et al., 1991; Jewitt, 1981; Wiens, 2020).[15]

The issue of separability is also central in problems of deontic detachment (Räikkä, 2000, pp. 209–210). Let's say that you have an obligation that has two components to it: you must both accept to evaluate an article and evaluate it on time. However, it just so happens that you don't plan on evaluating it (neither before nor after the deadline — you are simply not going to evaluate it). In these circumstances, is it wise to accept the invitation to evaluate the article?[16] You could tell yourself that, even if you don't plan on evaluating the article, you can still fulfill the content of your obligation *in part* and accept to evaluate it. This reasoning is problematic, however. In the above example, the two parts of your obligation "go hand in hand." They aren't separable. The interactions between the different components of your obligation must be taken into account.

Similar problems arise when it comes to formulating recommendations in the public sector. As we have seen, advisors produce lists of distinct recommendations. Generally, the recommendations are numbered and set off from the main text in separate boxes. Interactions among these recommendations are rarely highlighted. However, these interactions are important and can affect the quality of decisions made, especially when one considers that decision makers tend to ignore certain recommendations.

Let's go back to the example discussed in Section 1.3. Suppose that a policy advisor wants to reduce the greenhouse gas emissions of an industrial city that is similar to Kalundborg and which also has several industrial plants (coal-fired power plant, refinery, cement factory, etc.). Drawing inspiration from the principles of industrial ecology, the advisor targets the following actions:

1. The city should have a coal-fired power plant.
2. The city should have a refinery.
3. The city should have a cement factory.
4. The city's industries should cooperate amongst themselves so that the outputs of one industry become the inputs of another.

Considered in view of the objective to reduce greenhouse gases, these recommendations are synergic. Their combined effect is a lot larger than their effects taken individually.

Now let's imagine that the decision maker ignores the fourth recommendation. However, this decision maker makes a point of following the advice they receive — *at least partially*. So, they decide to keep the city's coal-fired power plant, refinery, and cement factory. They just don't intend to force these companies to cooperate amongst themselves so that the waste material generated by some of them can be upgraded by others.

[15] We analyze the relation between public-sector recommendations and the theory of the second best in another article. See Daoust and Babin (2022).

[16] See Estlund (2021).

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Although the decision maker accepts three recommendations out of four, they probably make the worst decision possible. The reason is that the above four recommendations make sense when they are taken together, not separately. Ignoring the interactions between recommendations is a decision-making error.

In short, there are often significant interactions between public-sector recommendations. To encourage policy makers to make good decisions, policy advisors should clearly indicate such interactions between different recommendations, or else the structure of the recommendations itself should reveal any significant interactions between different measures. Currently, such interactions are rarely highlighted in public-sector reports. Moreover, the standard presentation format for recommendations gives the impression that the recommendations are separable. The numbered list of recommendations separates each recommendation from the others.

One could argue that this isn't a real problem, since decision makers never approach these recommendations one by one, each in isolation from the others. No decision maker thinks, "My objective is to comply with as many recommendations from policy advisors as possible, no matter what interactions there are between the recommendations made to me." It is certainly true that no decision maker thinks like that explicitly. However, a similar type of reasoning has been observed in the follow-up assessments of recommendations made by certain institutions.

The following example serves to illustrate this. Institutions measure the progress that governments and ministries make toward certain targets. How is this progress measured, exactly? In the 2020–2021 action tracker tracking the implementation of recommendations made by the Quebec auditor general and the sustainable development commissioner, progress is expressed in the form of a percentage of recommendations implemented (Vérificateur général du Québec et Commissaire au développement durable, 2021). In other words, decision makers are induced to implement a high percentage of recommendations. In the above-mentioned action tracker, the desired target is 75%. So, if 100 recommendations are made, the aim should be to put in place 75 of them.

This way of understanding targets is quite common. Targets of this type are referenced in reports by the city of Montréal auditor general, the Quebec ministry of municipal affairs and land use, and Canada's Office of the Taxpayers' Ombudsperson (Vérificateur général de la Ville de Montréal, 2018; Ministère des Affaires municipales et de l'Occupation du territoire, 2015; Office of the Taxpayers' Ombudsman, 2017). All these documents start from the principle that as many recommendations as possible should be met. The target is not sensitive to any interactions between the different recommendations set forth. However, if there are significant interactions between recommendations, they must be taken into account. Good decision making doesn't consist in ticking off the most recommendations on a list. Targets expressed in the form of percentages of recommendations implemented do not reflect interactions between the recommendations or between their individual effects.

We think that this problem partially stems from the manner in which recommendations are presented to the decision maker. We address this point in the conclusion.

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3. The Issue of Recommendations' Stability

The second issue is somewhat connected to the first. It concerns the question of how to make "stable" recommendations.

A set of recommendations is said to be stable under C when changes in a set of conditions C do not affect recommendations made by institutions. Conversely, a set of recommendations is unstable under C when changes in this set of conditions do affect the recommendations.

In light of the observations made in Section 1, policy advisors are faced with the problem of instability when it comes to formulating their recommendations. Here is why. We have seen that policy advisors frequently concern themselves with how applicable or realistic their recommendations are. In other words, advisors generally want decision makers to apply their recommendations. However, advisors know that decision makers often go no further than a *partial* compliance with recommendations.

Let's say that a policy advisor comes up with a set of recommendations for a decision maker. They later learn that it is highly likely that this set of recommendations will be met with a partial compliance at best. How might a reasonable advisor react to this information? If the recommendations initially put forth have significant interactions, the advisor might be tempted to *revise* them. In that case, their plan isn't stable as long as one of the conditions is that "the decision maker is very likely to ignore certain recommendations."

Here is an example that illustrates this scenario. Let's go back to the example of the city of Kalundborg, presented in Section 1.3. Suppose that an advisor wants to propose a plan for the protection of the environment and that they initially make the following four recommendations:

1. The city should have a coal-fired power plant.
2. The city should have a refinery.
3. The city should have a cement factory.
4. The city's industries should cooperate amongst themselves so that the outputs of one industry become the inputs of another.

The advisor knows that the decision maker is highly likely to ignore at least one of the four recommendations. Furthermore, it is clear to the advisor that a case of partial compliance could lead to actions that would be highly damaging to the environment. Since the advisor values environmental protection, they could be inclined to *revise their recommendations*.

The problem is that the revised plan could also be partially ignored. And so, if the revised recommendations also have the potential to interact significantly, the issue of instability hasn't been resolved. In other words, as long as (i) the advisor believes that their recommendations are likely to be ignored and (ii) the recommendations have the potential to interact significantly, the advisor remains in a situation of *instability*. As long as the advisor reasonably believes that their recommendations could be ignored, they may be inclined to revise their recommendations.

The following objection could be raised against this argument. The simple fact that a decision maker ignores a recommendation does not mean that it should be ignored.

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Recommendations can still have a fundamental place even if decision makers ignore them. For instance, even if the government doesn't intend to acknowledge systemic racism, the coroner's office may judge that the best decision is to prevent death and to put forth that recommendation (Kamel, 2021, p. 20). The discriminatory treatment of certain individuals can, in certain extreme situations, lead to death (Kamel, 2021, p. 20). In line with this, an advisor could think that sometimes one has to make recommendations, even knowing that they will be ignored. The role of advisors isn't to identify those recommendations that decision makers are likely to accept. Their role is to identify recommendations that achieve specific valid objectives.

This is a pertinent objection. It refers us to one of the important functions of public-policy recommendations. Advisors in the public sector are given the mandate to develop plans, policies, and strategies that achieve certain objectives. The coroner's office, for example, wants to prevent deaths, and if a recommendation helps to reduce the risk of death, it is pertinent. *It's in the chief coroner's mandate* to make such recommendations, whether or not decision makers take them into account. Thus, the fact that the decision maker intends to ignore certain recommendations is of secondary importance when they are being formulated.

However, public-sector institutions have other legitimate objectives as well. These institutions value doing useful work. More specifically, these institutions value putting forth policies and measures that will ultimately lead to better decisions. However, in certain circumstances, partial compliance with recommendations is harmful or counterproductive. And so, since institutions value putting forth policies that lead to positive results, they cannot completely ignore the issue of partial compliance.

Knowing that recommendations will be in part ignored causes real headaches for advisors in the public sector. On the one hand, institutions must try to find recommendations that are consistent with their objectives. But, on the other hand, they must try to find recommendations that aren't counterproductive. These two desiderata in the making of recommendations are not always fully compatible with one another.

There are different ways of resolving this problem of instability. Here are two of them. First, advisors could restrict themselves to formulating recommendations that do not interact with one another. In this way, each recommendation would be meaningful and beneficial on its own. Second, advisors could alter their recommendations so as to reduce the probability that these will be ignored by decision makers. For example, advisors could keep to making minimal recommendations that are easy to put in place, so that the decision makers would have little reason to ignore some of the recommendations.

However, these two solutions are not always available options. The first one depends largely on the problem being studied. If advisors need to look into complex problems, where different variables are interdependent, it can be very difficult to come up with recommendations that are totally separable. Let's go back to the Kalundborg example. When it comes to solving complex industrial-chain optimization issues, the relationships among the different industrial sectors are what allows the different groups to improve their environmental record. Every decision to add an industrial sector to the system or to remove one from it can be assessed only from a global point of view. In other words, all decisions are interdependent on each other.

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As for the second solution, it enters into conflict with an important desideratum of making recommendations. As we said earlier, one of the important functions of public-policy recommendations is to come up with plans, policies, or strategies that achieve specific valid objectives. Let's say that the advisors keep to making "minimal" recommendations that the decision maker is likely to accept. Yet nothing guarantees that such recommendations will actually achieve the valid objectives sought by the institutions. In other words, keeping recommendations to a minimum solves the issue of instability, but it enters into conflict with the institutions' missions.

How do we get out of this deadlock? Once again, we think that the problem may well lie in the way in which recommendations are presented. More specifically, alternatives to the numbered list of recommendations could resolve the problem. We will come back to this point in the conclusion.

4. Conclusion: Toward Recommendations for Recommendations

In this article, we have identified two philosophical issues surrounding the formulation of public-policy recommendations. To do this, we first built a conceptual framework that allowed us to analyze interactions between the recommendations in a report. We identified different types of possible interactions between the recommendations (such as implementation interactions and effects interactions). Among other things, this framework has allowed us (i) to better understand what we mean when we say that recommendations interact with one another and (ii) to better identify interactions that are particularly problematic.

Using this framework, we studied 40 Quebec public-sector documents that contained 570 recommendations in total. We were thus able to zero in on two issues around the formulation of recommendations. The first issue concerns the inseparability of different recommendations that are put forth by institutions. Sometimes recommendations come with significant interactions. For example, they may be fully meaningful and effective when they are implemented together. However, the format of the recommendations and the methods used to measure the "progress" achieved by decision makers and public institutions aren't sensitive to these interactions. The second issue concerns the stability of the recommendations. Very often institutions know that their recommendations will be met with partial compliance at best. This can create a situation where the advisors don't have a stable basis for formulating their recommendations.

We haven't proposed any solutions to these problems. However, we can already identify a few options to consider in view of their resolution. On the one hand, we should envisage other ways of structuring recommendations. The standard format of a numbered list of recommendations presents certain problems. In particular, it does not offer a way to take any interactions between different recommendations into account. On the other hand, we should review the measures used to track progress. Several institutions measure progress in the following way: the higher the percentage of recommendations implemented is, the more progress we have made. However, as we have demonstrated, this method doesn't offer any way to take into account interactions between the recommendations or between their individual effects.

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Such considerations need to be undertaken in partnership with the public service. We want to rethink how recommendations are structured and how progress is measured. Any alternatives proposed must be *appropriate and useful* for the public service — that is, they must be applicable. That means that we must clearly understand the pressures and obligations that institutions face. This is the only way in which we will be able to make recommendations that are appropriate for recommenders.

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