The time for information strategies has come
(Invited paper[1])

Chegou a hora das estratégias de informação
(Artigo convidado)

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Abstract
Algorithms (and robots, which are algorithms on {mobile} hardware platforms) will carry out more and more activities. This already affects and will affect, more dramatically, how work will be done in businesses of all kinds. It already affects and will affect, much more, the people due to and for whom the data will be processed, which means that it is no longer possible to think of a static strategy for data. The dynamics of markets and relationships will be essential to define the dynamics of organizations and, in the information age, to dictate the information dynamics of businesses and their strategies to address such dynamics.
Keywords: Information strategy; data privacy; LGPD; GDPR

Resumo
Algoritmos (e robôs, que são algoritmos em plataformas {móveis} de hardware) realizarão cada vez mais atividades. Isso já afeta e afetará, de forma mais dramática, como o trabalho será feito em empresas de todos os tipos. Já afeta e afetará, muito mais, as pessoas em função de e para quem os dados serão processados, o que faz com que não seja mais possível pensar em uma estratégia estática para os dados. A dinâmica dos mercados e das relações será essencial para definir a dinâmica das organizações e, na era da informação, para ditar a dinâmica informacional dos negócios e suas estratégias para tal.
Palavras-chave: Estratégia de informação; dados privados; LGPD; GDPR

1. Introduction

Well, to start with, it must be said that most of what people and companies treat as strategies are, in fact, just aspirations. As is the case with John Kennedy's historic speech to the US Congress about going to the moon, in the 60s, promising... "[...] landing a man on the Moon and returning him safely to Earth".

Neither Kennedy, nor anyone in the US or on the entire planet, had the slightest idea of HOW to do that, when the phrase was said – and applauded –, but – and this is where our story begins – NASA's strategy, in the 1960s, transformed Kennedy's aspiration into a single country's capacity and, in due course, turned mere speech into pure reality.
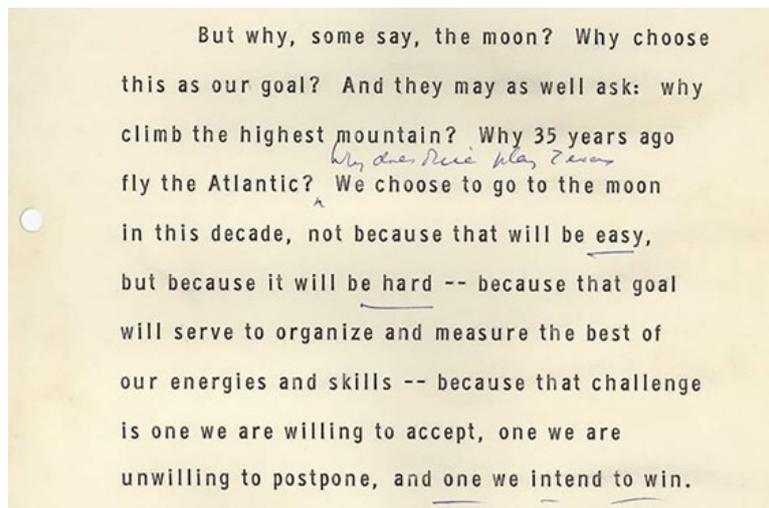
Strategies may be seen as a means of transforming aspirations into capabilities, considering time, space, and scale of what one wants to do. Kennedy's wish was expressed in a very simple statement and, yet, it was effective in capturing the imagination of the entire planet. The strategy to carry it out has always been complex and uncertain from the start, dealing with an almost unthinkable number of variables. Take a human step on the moon and come home, just a decade after the creation of NASA, it was almost unachievable... almost certainly impossible with the technology of that time, until it happened, in fact. That was such an impressive feat that, to this day, imbeciles[2] still deny what happened. But that's another story.

Our story is about information and data, specially personal data and strategies that lead institutions to respect people and their fundamental rights, such as privacy. For that, one of the laws of digital nature, whose philosophy is taken up in the LGPD (Brazilian act equivalent to European General Data Protection Regulation, GDPR), says that... PEOPLE'S DATA must be protected.

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[1] First published online at silvio.meira.com [in Portuguese]

[2] idiot: who cannot learn; ignorant: who would even learn, if s/he could or wanted to; imbecile: maybe even know, but ignores knowledge and pretends to be an idiot.

But why, some say, the moon? Why choose this as our goal? And they may as well ask: why climb the highest mountain? Why 35 years ago fly the Atlantic? We choose to go to the moon in this decade, not because that will be easy, but because it will be hard -- because that goal will serve to organize and measure the best of our energies and skills -- because that challenge is one we are willing to accept, one we are unwilling to postpone, and one we intend to win.

Figure 1 - Excerpt from Kennedy's speech

Laws are aspirations, as may have been noticed in our discussion so far. If the society has the means – education, culture, systems, coercion… – to enforce them, there will be strategies, tactics, and operations to make it happen. All 28 pages, 12,494 words and the coat of arms at the top of the first page of the LGPD, Law No. 13,709, of August 14, 2018, try to encapsulate the "digital law of nature" described above… and still have absolutely nothing like a strategy to do so… as well as almost 100% of all the discussion that has been going on, since before the law was passed in Brazil.

2. A minimum possible strategy

If that's really true… what would be a minimum possible strategy (MPS) to transform the aspiration to protect people's data into the ability to actually protect them? From the point of view of the institutions – which will face big lawsuits and millionaire fines, according to any casual conversation between attorneys –, a MPS would start with:

1. Not having user data. That simple. If the company has been operating for some time and has kept data for such a period, ensuring the aspiration to protect people's data goes through…

2. Wrecking all user data collected so far. Data is not the new oil. Compared to energy sources, data would be the new uranium. Data has to be mined from its sources (which includes customers and users), refined to separate what is wanted from what is not, have to reach critical mass to generate energy (i.e. value for the company and customers) and… after that, their storage or disposal can be harmful for the business, the customer and the ecosystem.

The less data about people companies have, the better, looking at it from that point of view. But how can it be done at a time when industry and academy are even creating a new career as a data scientist? it seems difficult. To get an idea of what data scientists do, in reality, some say that 40% of the time is spent on cleaning, another 40% as a watchman, and 20% trying to be a… clairvoyant. The main cause? Companies, without (any) strategy, collect garbage in the form of data. Of course, it's not that simple. The "seer" part of the statement above is associated not with the problem of collecting, but with the use of data: without a strategy, companies also do not know why they collect data and the purpose of collecting so much data. Lastly, the role of those who treat them, from an engineering point of view, is to discover (almost always blindly) how to mine, refine and extract value from the universe of data (or garbage) at their disposal.

Radioactive metaphors apart, "1" and "2", above, are also not strategies. They are aspirations… and "1" it might be a strategy, if someone started a new "figital" business (Meira, 2020, p. 147) from scratch and if, when needing data, chase them from the primary source (user) or from a secondary source, an agent chosen by the user to serve her/his "digital representative", according to certain pre-established rules. So, can innovation be created from changes in the regulatory space? Yes. Furthermore, when innovation arises from changes in the rules of behavior and competition, it has a very high impact.

In the real world, in the short and medium term, users will almost certainly not store and take care of their own data (but I might as well… e.g. Meira et al., 2011) nor does it seem that, at least in

Brazil, intermediaries will take care of user data for companies (but they could, e.g. Ichihashi, 2019). I'm pretty sure this will end up happening, which will certainly solve most user information lifecycle management problems in business, enabling business models big-data-with-zero-data like. But, for now, we must have strategies that do not go through "1" and "2". Just by chance, by the way, EMP (the Portuguese initials for *Estratégia Mínima Possível*, or minimum possible strategy) is also the acronym for electromagnetic pulse, which is something that can set off all the information – and the devices that store it – in the space where it occurs.

Without being able to use "1" and "2" as finishing points for our strategy, which are the next best?... Well, how about...

3. Collect only the minimum amount of data really needed and...
4. Keep this data for as long as is absolutely necessary.

If "3" and "4" are interpreted as abstract descriptions of the strategies, we are already reaching the state where we can ask the essential questions that would serve as a starting point for designing minimal viable strategies for data capture and possession, to handle information, data, and even LGPD (or GDPR) in business.

It must be made clear that information life cycle management of all kinds – within and for business – are a critical survival factor in the information and knowledge age. And this is not a legal problem, but an information engineering one, supported by software engineering, to ensure the business model sustainability. Because user-centric business models – that is, almost all -–depend, fundamentally, on data and its management.

This is where we need to draw attention to another law of digital nature, which may seem less addressed by the LGPD/GDPR, but which is at its core, and that law says that... PEOPLE must be protected from ALGORITHMS.

There is a lot of discussion about the obvious when thinking about personal data in custody of an institution. It is quite easy to notice when a loss, theft, or leak occurs, as there are incentives to make them public; and theft can become a leak, for obvious reasons, since it may even have been part of a deliberate scheme to leak data afterwards. But it is much more difficult, if not impossible, to identify when a business' algorithms are misusing people's data and making decisions that directly affect people's lives. It is the case of denying them credit for the purchase of a good, for example, based on a set of rules that privileges a set of other people (to whom they do not belong). This is a simple, and very common example of what is happening now, worldwide.

Algorithms (and robots, which are algorithms on {mobile} hardware platforms) will carry out more and more activities, more than they will suppress jobs, and about half of the current tasks will be automated. This already affects and will affect, more dramatically, how work will be done in businesses of all kinds. It already affects and will affect, much more, the people due to and for whom the data will be processed, which means that it is no longer possible to think of a static strategy for data (even less personal data). The dynamics of markets and relationships will (have always been) essential to define the dynamics of organizations and, in the information age, to dictate the information dynamics of businesses and their strategies to address such dynamics.

One of the main goals of a digital transformation, in any business, is to learn to use data to generate benefits... and this, in no business, is achieved through a data strategy. What is needed is a business strategy that incorporates a data strategy. If we had a process for formulating essential questioning, in context (and we even have, based on the "figital" concept defined in Meira, 2020), as part of a process for developing strategies, what are some questions we would ask about data?... What about...

- What data do we have?
- Where does data "stay"?
- Which systems use the data and for what?
- Have we already solved the problems of compliance and regulation?
- How could data...
  - Increase our agility?
  - Decrease costs and risks?
  - Create opportunities, increasing revenue and profits?...

... And all of this still taking into account the entire information life cycle, within and for the business, of which the Figure 2 is a good clue.

Figure 2 - Questions we would ask about data (in Portuguese)

Incorporated into a business strategy, a data strategy should… enable us to use data and algorithms to combine products with services and experiences, replacing sales and delivery with results and value for the client.

So, it seems that we can now risk to establish three essential postulates for an MPS, that could be used to manage the information lifecycle for almost any business. Reusing "3" and "4", above, and introducing a new "postulate"… it looks like this:

- ONE: acquire only the data that is actually necessary to better serve the customer and create value for the business;
- TWO: keep the data in the business information lifecycle just as long as is absolutely necessary to achieve the objectives of the first postulate, after which appropriate termination procedures must be carried out;
- THREE: treat data under business custody with algorithms that obey the second law of digital nature and ensure that results – including decisions – create value both for the customer and the business.

Of course, this is just the beginning. Large research projects, entire doctoral dissertations and large investments by companies of all sizes, in all markets, have been and are being made in this field. This is so complex that many large global companies do it for a living… but most of them, on the other hand, does not develop the capacity for businesses to create their information lifecycle management strategies, let alone the necessary connection to the business strategy itself.

Who does not handle data effectively and efficiently, now (and not just there, in the future), can no longer compete with those who have such capacity. LGPD and GDPR are just another facet, in an increasingly digital and social context, trying to ensure the proper treatment of people's data. And such acts can and should be dealt strategically, from a basic purpose: User-centered businesses must have the principle of respect for the user, represented in the digital universe by the trail of actions s/he takes, actions that end up represented by data, that can only be used for the purposes agreed with the user and that must be protected, whenever, and discarded when the user so wishes or when it is no longer needed to serve them. That simple.

A few words on the LGPD, at the moment: despite all the comes and goes, at least Brazil has, for now, a specific legislation in force for the protection of personal data. It is not a minor feat and, considering the legal process we have, it is almost a miracle that the law is not too bad. In fact, the LGPD is much better than the vast majority of laws on anything else in Brazil, not least because a good part of the country's digital community was involved in its achievement.

The law, of course, will continue to be made by the decisions the higher courts will take in disputes that, will undoubtedly, start soon. Especially because, in Brazil, the future is doubtful and even the past is uncertain. For managers, if possible, systems that deal with the information life cycle of your

business should take into account this Brazilian "feature": the system architecture has to be flexible, able to adapt to changes in the context and to new demands for user experience without requiring structural changes which, furthermore, would hinder the evolution of the system and your own business. Said in this way, it seems trivial, but it is almost impossible to do it minimally well done. And without the ability to create and evolve flexible, digital, and emerging strategies... it's completely unreachable.

For now, this is it.

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