


# Chapter 4

## Legislators' Plague: How History of Science Can Explain the Struggles of Universal Pandemic Responses

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### ABSTRACT

*This chapter brings important novel insights and perspectives to the urging contemporary debate on public hygienist policies. The authors intend to explore how an episode of history of science can be used to explore the struggles of universal pandemic responses. The focus will be on the inception of science-based legislation, created to deal with public health emergencies, and their communication and social acceptance. They argue if any of the symptoms of science misinformation and a weak science foundation of legislative action identified in the 2020 coronavirus pandemic can be identified in an early 20th-century outbreak of bubonic plague in Portugal. They present a national legislative policy timeline towards the pandemic effort in the form of consolidated legislative responses to fight Porto's emerging pandemic in 1899. They also provide future studies on science-based policy with newfound material, aiding the characterization of the communication and eventual harmonization of concerted responses in preempting the spread of pandemics.*

### INTRODUCTION

The rule of law is one of man's best tools for a societal containment of infectious and communicable diseases. Social restriction measures can, at least, be parallel to the range of common medical indications. As stated in some of early 20<sup>th</sup> century pandemics, like the "Spanish Flu", compulsory home isolation

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and sanitation measures were not particularly effective on controlling the epidemic spread (Alvarez, 2009). But on the other hand, legislative interventions such as the restriction of public movements and gatherings, combined with epidemic surveillance, have proved effective on some pandemic outbreaks (Medicine, 2007). The compliance on the directives on global public health information have prompted many countries to revise their public health laws. In some cases, it took the impact of a full-blown pandemic crisis to several countries made their ground-breaking legislative actions on sanitation and public health. However, sometimes legal bills were based on old and flawed knowledge as the development of contemporary science was thriving in the early 1900s (Martin, 2009).

The concept of “flawed-science”, can easily be linked to the way proper science is disseminated. The ongoing memory of “fake-news” and misinformation on the recent SARS-CoV-2, Coronavirus pandemic in 2020, brought a negative frame when exploring the boundaries of science communication. This is important not only to the crystallization of public understanding of science, but also the bear concept of science-based policy. No one can dispute the importance of mandatory social distancing and compulsory personal protection equipment use on the containment of the COVID-19 pandemic. However, only with solid, proven and intelligible scientific evidence backing individual and collective restrictions of liberties, will the public accept dimly any sanitary directives. And in the “Misinformation Age”, this is no easy feat. Mainly, because it is often claimed that this information reality is driven by globalization social repercussions and the readiness of an unprecedented cooperative scientific endeavor. But is it so? Pandemics have been around for quite a while, as history tells us. Without the, sometimes, claustrophobic environment of social media and digital journalism, was there any room in the past for science misinformation? Haven't we experienced any case of misappropriation of scientific elements on the forging of information? What about legislation? Were any restrictions made, based on scientific evidence?

There are so many examples where science-based evidence was cast aside within the making of imperative political controls. Even today, at the “Age of Information”, false data and its dissemination through digital channels, poses as extreme significance to construct and characterize designs of knowledge circulation. As such, it imperative to clarify if the legislation made on sanitary laws in the context of a pandemic, can be important towards the definition of science policy and public health. And if so, how does the scientific knowledge spreads in this network of scientists, policy-makers and the public?

In this chapter, we want to explore how an episode of history of science can be used to explore the struggles of universal pandemic responses, recently on brink due to the 2020's coronavirus pandemic. The focus will be on the inception of science-based legislation, created to dwell public health emergencies, and their communication and social acceptance. We will argue if any of the symptoms of science misinformation and disparity on science foundations of legislative action identified in the Coronavirus pandemic, can be identified in an early 20<sup>th</sup> century outbreak of bubonic plague in Portugal. Our methodology is twofold. First, we report on the national legislative policy timeline towards the pandemic effort, naming pivotal elements of its inception, dissemination and acceptance. Secondly, it is presented a consolidation of legislative responses to fight the emerging pandemic in 1899's Portugal. A secondary goal is to provide future studies on science-based policy with newfound material, aiding the characterization of the communication and eventual harmonization of concerted response in preempting the spread of pandemics.

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