



(<https://www.riskcompliance.biz/news/covid-popper-galileo-and-kuhn-institutional-responses-to-covid-19-emergency-between-theory-and-practice/>)

Covid, Popper, Galileo and Kuhn: Institutional responses to Covid-19 emergency between theory and practice (<https://www.riskcompliance.biz/news/covid-popper-galileo-and-kuhn-institutional-responses-to-covid-19-emergency-between-theory-and-practice/>)

22 April 2020

Privacy - Termini

by Massimo Balducci

Institutional responses to Covid-19 emergency raise a few questions. Investigating these questions will lead us to dig deep into the relationship between theory and institutional behavior. We will single out two institutional responses to two critical challenges: (i) time requirements of standard institutional reaction in the area of Covid-19 therapy and (ii) a multi-disciplinary approach in the response to a complex challenge. Our analysis might possibly be biased by our idea that responses in these two cases are not up to citizens' reasonable expectations.

Pretty soon after WHO declared Covid-19 as a pandemic, one could read in the press and in social media that a few medical approaches could have positive effects on patients (chloroquine, fluidificants like eparine etc.). Institutional reaction to these challenges was scientifically perfect, i.e. putting up a formal double check experiment to verify/falsify the hypothesis and eventually to establish a treatment protocol. The exercise is in process at this very moment and will possibly last a few months. But in the meantime: can society afford to wait that long? Here, our institutions are unaware and paying a heavy toll to Popper's approach to science. Roughly speaking, Popper cuts the research process into two phases: working out the hypothesis (based mainly on intuition, i.e. the ability of *intus ire* meaning getting into the problem) and, once the hypothesis was formalised, to verify or falsify it, i.e. to test empirically if the hypothesis is correct.

In medicine, this way of thinking brought as a positive follow up the so called evidence based medicine, an approach according to which diagnostic and hailing processes are supposed to be empirically verified. Popper's approach is, however also having negative impacts on our social systems. Today, social focus is on the second phase of the research process as envisaged by Popper and no room is left for the putting up of hypotheses. Not only in the pure scientific field, but in every professional area. Medical doctors are known to waste money and time to request complex technical checks for their patients hoping that these very medical checks will mechanically be able to work out a diagnostic hypothesis. Actually, technical checks can only verify or falsify an hypothesis and they cannot produce any new one.

In the field of research at large peered review committees, they are the worst enemy of the advancement of science. Articles submitted for publication and peer reviewed cannot dare to advance new hypotheses. The same happens in the area of research funding: only research projects that do not dare to challenge what is supposed to be scientifically polite will be funded. Popper's perspective has been overcoming and shadowing Galileo's contribution according to which the research process is a never-ending endeavor where hypotheses are continuously refined and improved while faced with empirical evidence. They are not brutally verified or falsified. Is a MD supposed to wait for a new protocol once the new evidence was verified in a long empirical process; or rather is s/he supposed to get immersed in a trial and error process with his patients, while exchanging views and results with her/his colleagues?

People involved in real life do not enjoy the time availability of people involved in scientific research, secluded in laboratories cut off from any external environment. They are supposed to make quick decisions on the spot and with not enough information. Amitai Etzioni calls those decisions quasi experiments. Covid-19 is providing us with a crucial contribution: it shows that our protective decision-making processes hinder any effective capacity of reaction by our institutions. Here, it has to be stressed that we have been underestimating the expectation from compliance officers, not only to check the compliance of actual behavior with established standards, but also to advance proposals for a never-ending improvement process according to Deming's approach.

Whereas Popper's influence on actual institutional behavior has been, in our view, overwhelmingly negative, we regret that Kuhn's perspective is being completely ignored. Kuhn, a researcher of the Jewish German diaspora during Nazism, describes the development of scientific research –on the basis of his personal experience at Chicago University- as a two phase process. A paradigmatic phase where research grows around one paradigm, taken for granted for the sake of it. Research work is basically the search for empirical evidence to verify the paradigm.

As time goes by, more and more exceptions emerge that do not comply with the paradigm to the turning point where exception cases bypass cases that comply with the paradigm. Here, we are in the inter-paradigmatic phase. In this phase, no branch of science can afford its own method while in a paradigmatic phase each branch of science is based on its method. In an inter-paradigmatic phase, single issues are analysed from different perspectives. Covid-19 is being analysed almost exclusively by one single perspective, which is the medical one. Only recently has the socio-economic perspective been taken into consideration once the most invasive decision were long made.

Kuhn's approach has been having, on the contrary, a remarkable impact on data analysts, who are well aware that we are living in turbulent times (functionally equivalent in real life of what in the scientific world is an inter-paradigmatic phase). In turbulent times, data provides no information. According to Ackoff's approach, data can provide information when they are compared with more data. The number of Covid-19 casualties, for instance, is meaningless if not compared with the number of deaths in previous years and/or the number of casualties for other diseases. Theory and institutional behavior are strongly and mutually linked.

The author, Massimo Balducci is a Professor at the University of Florence (Firenze) and one of the authors at our Italian website www.riskcompliance.it (<http://www.riskcompliance.it/>). He is an expert working for the European Network of Training Organizations of Local and Regional Authorities (ENTA). Massimo is an author of several publications in French, English and Italian about Public Management.

1 Comment (<https://www.riskcompliance.biz/news/covid-popper-galileo-and-kuhn-institutional-responses-to-covid-19-emergency-between-theory-and-practice/#comments>)



(<http://www.facebook.com/sharer.php?u=https://www.riskcompliance.biz/news/covid-popper-galileo-and-kuhn-institutional-responses-to-covid-19-emergency-between-theory-and-practice/>)



(<https://plus.google.com/share?url=https://www.riskcompliance.biz/news/covid-popper-galileo-and-kuhn-institutional-responses-to-covid-19-emergency-between-theory-and-practice/>)



(<http://twitter.com/share?url=https://www.riskcompliance.biz/news/covid-popper-galileo-and-kuhn-institutional-responses-to-covid-19-emergency-between-theory-and-practice/&text=Covid%2C%20Popper%2C%20Galileo%20and%20Kuhn%3A%20Institutional-responses-to-covid-19-emergency-between-theory-and-practice%20>)



(<http://www.linkedin.com/shareArticle?mini=true&url=https://www.riskcompliance.biz/news/covid-popper-galileo-and-kuhn-institutional-responses-to-covid-19-emergency-between-theory-and-practice/>)

Privacy - Termini