Agorichmic
Feudalismand
Sacred RNA
Purity

Denisa Kera

Algorithmic Feudalism and sacred RNA purity: Homeschooling Pods, Tesla Eco-villages, and Suburbia Al-training camps

Introduction

The unintended effect of the COVID-19 pandemics is the rise of automation promising a future without vulnerable and virus-prone humans. It is a future of jobless masses training Als to support automation while returning to the "bio-safety" of rural, isolated, and small communities. On one side, there is the US scenario of a failed state becoming a subsidiary of Amazon and Microsoft clouds and Gates Foundation. It is a large suburban human factory for training Als by locked-down and isolated citizens making themselves redundant while zooming in and out of the virtual desert. On the other side, the equally extreme New Zealand scenario that offers a vision of utopian, small, rich, and isolated community with an eco-"religion" and fantasy that we can all become an island in the Pacific. In both scenarios, the goal is to reach RNA pure population either by vaccines or extreme lockdowns and isolation.

The emerging post-lockdown futures of suburban AI factory, utopian island, family cluster pod or eco-villages hint on the potential future "classes" but also the future politics. It is a politics in which national interests merge with virus-profiteering and bring new (RNA) uniformity more radical than any issue of race or national identity. Automation, next generation 5G networks, but also molecular control over "vaccines" are all potential sources of profit. They even inspire a surge of a carnivalesque 5G etc. conspiracies and fantasies that deflect the attention of the masses and make any critique of such surveillance and automation infrastructure impossible.



The post-lockdown future brings a combination of molecular uniformity, social domesticity, and technical automation that threaten the cosmopolitan fibers of our cities and cultures. They diminish plurality and diversity of any kind for sacred "RNA purity" that is driving all political interventions. The variations on the calls for sacrifice to serve the RNA purity show that political theology's insistence of pre-modern and religious sentiments (Kahn 2012) is making a spectacular comeback via our molecules. The future control of molecules in metabolism, immunity, and ecology guided by concerns for survival results is this image of RNA pure population. The control of patented molecules, together with intrusive data and code in contact tracing apps and automated 5G infrastructure further the surveillance and atomization of the future community. They support the model of population management that puts everyone into suburban, rural and island communities of immunized pods and villages for AI trainers that make the cosmopolitan and intercultural city life impossible.

We will describe this future as algorithmic feudalism, a paradoxical return of a tribal and premodern society based on advanced and new technologies supporting political theology concepts of sacredness, sacrifice and purity. There are no citizens in this future, just AI training serfs in clusters of families under the powerful lords of clouds and vaccines embracing an eschatology of viral "second waves". Is there any alternative to the algorithmic feudalism of the 2020 virus-profiteers with their clouds, platforms, 5G next gen networks, and vaccines standardizing the immunity and infrastructure of the population? How to poetically and critically design, think, and perform the algorithmic futures? How to exorcise the fears and fantasies about future automated body politics, cyber-leviathans, and autonomous invisible hands in the emerging Al suburbia with its pods or the eco-villages?

Virus parousia

1
Jeanne Guillemin "Miasma,
Malaria, and Method"
https://tinyurl.com/y5dxtn8a

Even a superficial reader of Michel Foucault will notice that the 2020 embodies his canonical notion of pastoral power as "care" that turns into biopolitics. The reduction of citizens to populations in search of herd immunity or equally problematic viral purity is bringing some of the most extreme forms of obedience and control discussed in Foucault's 1978 lectures (Foucault 2009). Disciplinary power moved ever closer to the molecular and even nano-levels performed over PCR tests, masks promising control of droplets and RNA molecules, and future vaccines. It is pervasive and includes even aerosols reviving an old miasma fantasy of an "invisible dangers lurking in the air" that turns the entire planet into a "landscape of fear" (Jeanne Guillemi)1.

The COVID-19 biopolitics strives to control molecules and nanoparticles that come in and out of the population's "body". It is a global "body" vulnerable to viral hotspots and illicit molecular exchanges in the bars, beaches, and public spaces. To control the RNA molecules, the states hurl various epidemiological models that will help them win in the statistical games with missing and manipulated data. Personal or individual health, fitness or freedom are all reduced to only one value-a nose clean from the virus. Countries compete in this new race for the right RNA values and epidemiological data that define all other social and ethical values or political norms.

The "calculative" reason that defined the modern state according to Foucault, this "raison d'État" (national interest), morphed into such models and data describing infection rates in the population. What used to be a geopolitical problem of a balance between competing interests and states in their "open time and a multiple spatiality" is turning into one COVID-19 Olympics under the eschatology of the "second waves". It reduces the national interests to daily statistics about infected, intubated, and dead, mea culpa stories about the bars and beaches, and moralist ruminations on the

"second waves," the secularized version of the second coming, a virus parousia.

This vision of RNA normalized and regulated population with virus eschatology is merging with an older model of power from political theology. It is not a soft-power approach leading the population to obedience by taking care of their health and well-being, but a brutal attack on all freedoms and autonomy with lockdowns that only test how far different states and sovereign can push their exercise of arbitrary power and exception.

The eschatology of the "second wave"

Back in 1978 Foucault showed how eschatology makes every crisis a part of how the "system" works and maintains itself. He used as an example the eschatology of the nuclear arm race and the conflicts over resources and ideologies. Nuclear eschatology imposes a need for a global peace as a constant balancing act between the states and their interests. According to Foucault, the modern state "seek to assert themselves in a space of commercial competition and domination, in a space of monetary circulation, colonial conquest, and control of the seas, and all this gives each state's self-assertion not just the form of each being its own end..., but also this new form of competition. To use somewhat anachronistic words for this reality, a state can only assert itself in a space of political and economic competition, which is what gives meaning to the problem of the state's expansion as the principle, the dominant theme of raison d'État." (Ibid.)

This competitive "assertion" in space with a possibility of nuclear annihilation forced the modern states to seek a global peace under the imperfect and "fragile" eschatology. Foucault describes this peace in scientific terms as an equilibrium in a system defined by physics rather than a political phenomenon. It is a process happening in space rather than time (history), and instead of a search for an empire or



"universal monarchy as the culminating point of history," the modern states only preserve the spatial balance while maintaining their diverse, plural, and competing interests: "It is universal peace, relatively universal and relatively definitive peace, of course, but the peace one dreams of at this time is no longer expected to come from a finally united and definitively unchallenged supremacy like that of the Empire or the Church. Rather, this universal and relatively universal peace, this definitive but relatively definitive peace, is expected from a plurality without major unitary effects of domination. Peace will no longer come from unity, but from non-unity, from plurality maintained as plurality."

The fragile eschatology of the nuclear peace that preserved the modern plurality of ideologies and states is a spatial category. It replaced the Middle Age (monotheistic) eschatology of the "second coming" as a return of the absolute unity and empire of the saved souls, which is temporal. In his March 22nd 1978 lecture, Foucault discusses this as a transformation from the feudal conflict between princes to the modern states. The feudal competition by princes and their religions seeks a victory in time (before the second coming). Present competitions between states by diplomatic-military systems have no historical goal except preserving the balance of powers from the danger of nuclear annihilation. While the feudal pastoral power manages the souls that seek redemption in the second coming, the modern power transforms souls into citizens that need to stay healthy and serve the fragile equilibrium between the states in future military conflicts.

The emerging pastoral power over RNA and CO2 molecules share elements of both eschatologies and forms of power. They either preserve the optimal immune system in the population at a time of pandemics or a certain ideal of an ecosystem. The COVID-19 eschatology of the "second wave" includes the temporal ideal of a perfect end of history, pre-viral global empire, while there is

a ranging competition between the states over medical supplies, vaccines etc. in a looming war. This eschatology defines the national interests as virus-profiteering efforts (patents, supplies) while demanding a biological unity on the RNA level of a virus-free population. Instead of a religious search for absolute unity with Christ or other gods or some global peace as a fragile unity between competing states, we are witnessing a strange return of premodern forms of society (feudal communities with their idea of a sacred purity) supporting very modern ideas about regulation of molecules.

Molecular RNA empires

The 2020 search for herd immunity and viral purity shares the goal of the premodern pastoral care for the future unity and kingdom of the saved souls. The function of the collective (kingdom) is to prepare the sinners for the unity of the second coming. This is close to the present goals of virus eschatology postponing the second waves that bring a similar care for the bodies waiting to be saved and vaccinated. It is a promise of a unity over the antibodies in the new molecular empire of vaccines and future miraculous virus-free paradise.

There are no citizens in this viral parousia as there are none in the eschatological unity with God, there is only one saved population. In the transitory state between the two kingdoms, all we have to do is to "pray" for everyone which in the present means constantly discussing the data on the numbers of the infected, asymptomatic (that sinned but don't know it yet), immune but losing it so they will sin again (antibodies), the ones loved by the "god" (T-cell immunity), and the cursed ones with prolonged infection that keeps coming back (like some version of virus purgatory). This division of citizens based on their immunity status and different stages in reaching RNA "sainthood" feeds the regressive fantasies of small isolated communities, in which we wait for the future molecular empire under the algorithmic feudalism of contact tracing

"Flu deaths drop in Australia as coronavirus restrictions save hundreds of lives" https://tinyurl.com/y4pb8pwf



and virtualization of everything, with citizens reduced to delivery men and Al helpers.

The embrace of the lockdowns, but also of small, safe, and isolated communities define this viral and algorithmic feudalism. It supports and serves automation while imposing the political theology concept of a sacred virus-free unity of the population and regressive domesticity, patriarchy and feudalism. It reduces the plurality of the modern state from a spatial category to a temporal one describing different phases in the epidemic curve which we all try to "flatten". States as previously defined by "indefinite historicity... an open time without end... that have their law and end in themselves" are returning to the pre-modern notion of a virus-free "kingdom" and a final empire in which (immune) unity will be restored". The future imm(unity) of such virus-free population is absolute, it even excludes certain types of deaths and dangerous molecules as we can read in articles about the ideal states, such as Australia beating not only the COVID-19 but also the seasonal flu².

Virus-free population becomes an ideal community achieved through various forms of lockdowns but also creation of small and isolated communities, educational pods and family clusters. These social bubbles not only save lives but also fully embrace the automation and economy that is increasingly independent on vulnerable and virus-prone humans. The search for RNA unity and purity in this molecular and Al feudalism perverts what Foucault hoped to be an alternative to the modern state; an emerging counter-conduct and revolution which will impose the fundamental rights to break "all the bonds of obedience". It is a revolutionary eschatology of the "civil society" free from the "constraints and controls of the state, when the power of the state can finally be reabsorbed into this civil society".

Revolutionary molecules

The COVID-19 moral community insists on one fundamental "right": to be free and not die from certain RNA viruses. Instead of a revolution against oppression, this virus eschatology advocates the most extreme and absolute forms of obedience. It also offers collective and individual experiments with DIY vaccines or self-medication and other forms of trials in which we learn how the collective immunity works in controlled exposures.

The COVID-19 biopolitics makes virtually impossible any form of "counter-conduct," rebellion or the right to define your laws and experience agency and sovereignty: "My law, the law of my own requirements, the law of my very nature as population, the law of my basic needs, must replace the rules of obedience. Consequently, there is an eschatology that will take the form of the absolute right to revolt, to insurrection, and to breaking all the bonds of obedience: the right to revolution itself". (lbid.)

The jobless masses preserving their RNA unity and purity are subjects of extreme obedience and control with claims that only strict lockdowns can save them from the pandemics but also the looming ecological crises caused by other evil molecules. These claims push the population into extreme isolation, poverty, and deprived of any agency to support a moral vision of a collective fighting molecules in some looming "second and third waves," virus and eco-disasters. The effect is always the same: supporting further automation in the new ideal of an algorithmic feudalism and sacred molecular community. The only economic prospect for the fragile and jobless citizens attacked by molecules is to train Als and support further automation, which will supposedly save them from the need to interact with any vulnerable humans and also save the planet. All this while dreaming of remote islands, pods, and even eco-villages.

The eschatological molecular fantasies of safe pods and islands hint that not all lockdowns will be equal, but they will

create new "classes". The combination of molecular uniformity, social domesticity, and technical automation in these feudal pods and tribal/family structures brings an end to the cosmopolitan city, plurality, and diversity that formed the modern state. We are regressing into algorithmic and molecular feudalism that uses the economy of molecules in metabolism, immunity, and ecology to support tribal and premodern theological concepts of sacrifice, sacredness and absolute hierarchy. The clusters of families in various eco-villages and suburban lockdowns in some permanent eschatology of the "second waves" promise virus purity, but they only support the advances of automations, surveillance, and molecular control.

Absolute, fragile, and revolutionary eschatologies

There are three types of eschatologies in Foucault defining the different stages and forms of sovereignty, power and control of the population that seem to compete in the COVID-19 crisis. First is the absolute eschatology of religion promising the second coming and unity in Christ etc. transformed today into lockdowns waiting for RNA purity. Second is the revolutionary eschatology based on fundamental rights to fight the obedience and enact alternative forms of community carried out today by various heretics refusing lockdowns, masks and embracing conspiracies. The third and maybe a dominant one is the relative, precarious and fragile eschatology of the peace as an equilibrium between competing states during the Cold War, expressed today in the various COVID-19 models of management but also comparison graphs showing the numbers of infected and dying: "With these different procedures, instead of a sort of absolute eschatology that posits an empire, a universal monarchy as the culminating point of history, we have what could be called a relative eschatology, a precarious and fragile eschatology, but towards which it really is necessary to strive, and this fragile eschatology is, in short,

peace. It is universal peace, relatively universal and relatively definitive peace, of course, but the peace one dreams of at this time is no longer expected to come from a final unity".

The regulation of molecules over a variety of lockdowns and social distancing experiments in 2020 and the biopolitical experiments with molecular control support all three forms of eschatology at the same time: the equilibrium and peace serving plurality, the unity of the "second coming," and the revolutionary counter-conduct breaking of all the bonds to achieve some fundamental rights. The COVID-19 states compete in their virus profiteering efforts and patents like in any other modern period. They also search for an absolute viral (RNA) unity and purity before the "second coming (waves)," in which no one will die from the infection in a typical religious manner. They also allow the revolutionary zeal of various heretics that take the streets to protest and demand change of the virus politics.

The COVID-19 biopolitics brings all together, the heretical revolutions, molecular competitions between states, and the molecular unity of a virus-free population. Health becomes the fundamental right over which there is a severe competition in vaccines patents and supplies or ideologies on how to achieve it. Fundamental to all national interests become the issues of automation over the next generation of 5G networks but also the "molecular" control over "vaccines" with the carnivalesque genre of 5G conspiracies.

These national interests push the population into a suburban human factory for Al training while offering ideals of utopian, small, rich, and isolated communities with new pure viral and eco-"religion". The molecular biopower and ethics of viral care support these regressive forms of domesticity surrounding the suburban, island, and rural utopias based on technological advances of automation. Humans become slaves, training Als in their zoomed suburban camps of self-sustainable and isolated pods and villages. They are occasionally allowed to rebel

against the brutal collectivity of the infected, vaccinated, asymptomatic citizens under the new eschatology of a virus-free population.

The rise of the algorithmic feudalism in the suburbs, pods, and eco-villages

Foucault's "genealogical" predictions of biopolitics as a possibility of extreme population control over human bodies and health comes from his detailed readings of old and often forgotten texts about pastoral care. He identified the political purpose in these "spiritual" ideas connecting the issues of sovereignty, territory, history and eschatology. Against the temporally defined kingdom of the second coming of Christ, he positioned the modern states defined by space as lacking any history or temporal goals. The viral futures seem to bring back this division between space and time, and they show a possibility of a hybrid modern "state" with both. The somewhat ironic eschatology of the "second wave" of infection forces the population to succumb to the interests of the virus-profiteers but also accept the obedience of the new algorithmic feudalism. Against the "open time and a multiple spatiality" of the modern plural state, it confronts us with a society searching for an ideal eco- and virus-free "state" with close time and even more closed space.

The medium of all recent virus eschatologists is not some manifest or the Bible, but the mathematical model. Just like the temporal kingdoms of saved or classless population in the Bible and the manifest, the COVID-19 models offer management of hopes and fears related to the kingdom of virus-free population. These models help the "transitional phase between a first unitary kingdom (healthy, COVID-19-free states) and a final empire in which unity will be restored (COVID-19-free). "They promise the "coming of a time when time will end, and to posit the possibility of an eschatology, of a final time, of a suspension or completion of historical and political time when, if you

like, the indefinite governmentality of the state will be brought to an end and halted".

The biopolitical ideal of a virus-free future is not necessarily the end of the lockdown. It can be just its soft version, such as the homeschooling pod in California or the imagined eco-villages closing the communities even more into their old-new feudal ideal. The models support the various calls for some alternative forms of schools, cities, and social life. They force citizens to self-organize into family clusters with similar aged children and co-quarantine with each other, hire tutors for in-person support for their kids. The eschatology of the second wave (and the impossibility of the ideal virus-free society) is also behind the latest proposal for the "Tesla of eco-village" by the Silicon Valley entrepreneur James Ehrlich. It is a plan for a sustainable, resilient 21st century community as the ultimate victory of biopolitical domesticity and automation, which explicitly works with the metaphor of Eden. His ReGen Village is a sustainable community that practices organic farming and circular waste management modelled after various eco-utopias. The villages will comprise a 20-hectare community as home to 100 families tending greenhouses for growing personal crops, but also village's communal farms and livestock. It is a literal vision of a return to the original garden, but also feudalism.

Living under
"the best of all
possible models"
and waiting for
the "second
wave"

While dreaming of reaching the ideal virus-free state we resemble Voltaire's Dr. Pangloss. His famous statement that we live in "the best of all possible worlds" (Voltaire n.d.) becomes the "best of all possible models" supporting various lockdowns and ideals of the post-lockdown community. The models have a magical ability to allow anyone to reason for any intervention they like. For present Dr. Panglosses (such as Bill Gates) even a pandemic (syphilis in Voltaire's time) is a reason to celebrate. In the best of all possible worlds "it was a thing unavoidable, a necessary ingredient



in the best of worlds; for if Columbus had not caught in an island in America this disease, which contaminates the source of generation, and frequently impedes propagation itself, and is evidently opposed to the great end of nature, we should have had neither chocolate nor cochineal (KACINIL – a red dye used for military uniforms)" (Ibid). In the present, we hope for the new "great end of nature" or the new normal, we are all waiting for the chocolate and more military uniforms supporting the pods and eco-utopias because there will always be more molecules we need to fight.

The best of all possible models and its quarantines promising herd immunity and miraculous virus-clear futures bring only more Al suburbia camps, cloud services, homeschooling pods and eco-villages. The best of all models even created their own inquisition, contract tracing apps, so it is easy to jail people indefinitely in their homes, dissolve parliaments and the rule of law, strip citizens of any privacy or rights by intrusive surveillance apps and monitoring. They have a magic ability to turn citizens into higher moral beings by putting a mask that signals their will to sacrifice any rights and freedoms to save the vulnerable in their communities. Thanks to these models, we also suddenly find ourselves living under the best of all governments. The extreme measures become higher moral choices because health and survival will be the primary concerns or government in the next century. The virus mirabilis infected us all with high tolerance to authoritarian rule that promises to save the population but also the planet.

In this new world under the best of all models no one is allowed to get sick or die from SARS-CoV-2 virus and all citizens are martyrs for a greater cause that saves and supports corrupt leaders, businesses and automation. These magic models from our Al, machine learning, and network theory experts do not need any tests and messy biological data about infection. They compensate for the missing data with more surveillance and models. The omnipotent

models become an alibi to infect the mobile phones with spyware and force everyone share our private data with problematic companies and agencies offering surveillance to these "best of all possible politicians" or to dream of future 5G infrastructure supporting automation of everything and everyone.

The models and apps are not serving any public, they serve the public as a dish to the hungry data over-lords that turn all of us into AI babysitters killing our jobs. It is disturbing to see the data-vultures and their intrusive surveillance techniques coming up with even more bizarre ideas on how to manage the population that serves only their business interests marketed as national interests. This leads to a future in which states will look like gated communities with citizens treated as locked farm animals occasionally let to roam under the latest model of another data-kabbalist.

Algorithmic feudalism, gardens and jesters

We are caught in a Leibnizian nightmare with promises of calculations, models, and algorithmic governance serving the regressive concept of sacred community and purity. What is good and just is not measured by the morality and legality of the actions but by some eschatological and metaphysical concept of the ideal state and survival. In his 1710 "Essays on the Goodness of God, the Freedom of Man and the Origin of Evil," Leibniz famously declared that we live in "best of all possible worlds" (Leibniz 1985) which Voltaire brilliantly mocked some 50 years later. What Leibniz meant was that there are beautiful mathematical abstractions which we are not always able to see and understand. The perfect being like God would not create something imperfect, so the whole world is something of a beautiful algorithm mirroring the perfect God as that "which is at the same time the simplest in hypotheses and the richest in phenomena, as might be the case with a geometric line" (Leibniz 2005).

Instead of gods, we have our beautiful algorithms that mirror and serve the corrupt leaders gaining more power of exception over algorithmic governance with its molecular eschatologies of climate apocalypses and pandemics. Just like Voltaire's naïve Candide in the work written after the 1755 Lisbon earthquake and tsunami, one of the biggest crises in Europe, we painfully realize that our current crisis is without good leaders, models, algorithms, platforms, pods and eco-villages. The algorithmic dream of Leibnizian "calculemus" is not mirroring the perfect god but the interests of various clouds, data and network corporations and lords and the corrupt leaders.

We are at the point in which Candide, after encountering every kind of horror and fanaticism, retreats and tells Dr. Pangloss that "We must cultivate our garden". Instead of being the victims of these present and future algorithmic, surveillance-based models and eschatologies, we need to gain agency over our immediate surrounding and turn it into something pleasurable like a garden. We need to concentrate on feeding ourselves, fighting boredom, but also defining our freedom on new grounds.

We need less WHO, Gates Foundations, and big pharma stories promising the best of all possible worlds and models. To "cultivate our garden" means to take care of local resources and innovation to decentralize manufacturing, drug discovery, and offer a future for everyone to participate. We have to resist the eco pods and villages to preserve diversity and plurality of our cosmopolitan and global cities and troll any idea of sacred unity of whatever kinds. Instead of one paradise with its eschatology, apocalypse and parousia, we have to insist on the plurality of gardens.

In the meantime, the best advice on how to manage this whole political, biological and social dread of isolation, uncertainty and dictatorship of molecules is to follow the old recommendation by a thinker who created a garden in times of chaos for his friends, Epicuros. His 3rd century new age and selfhelp advice was called Tetrapharmakos, and he was teaching his friends the following rules how cultivate your garden:

Don't fear god (and we should add governments)

Don't worry about death (from the epidemic); What is good is easy to get (we will find a way how to manage everything)

What is terrible is easy to endure (we are resilient, it will pass). (Hutchinson 1994)

Since we are regressing into the Middle Ages' concept of political community as an attempt to reach sacredness and purity while waiting for some paradise, we can take inspiration from the dissidents in the feudal time: the jester. Instead of becoming RNA purity supporters or heretics, we could look at the present politics as what Eric Winsberg describes as of "motley" practices in case of computer simulations used in policy decisions (Parker and Winsberg 2018; Winsberg 2001). The juggling of data, predictions, models and policies presents a colorful (motley) patchwork of values, data, stereotypes, moralist delusions, fears, demons, ideologies and geopolitics. It turns policy into a carnival where every idea and intervention are allowed, and no one bares responsibility because everything is possible. Instead of engaging the public and "democratizing" expertise, the opposite seems to happen - everything is super-scientific and with a bit of graph and data, you can sway the public in any direction. These motley practices of mixing facts and values, science and politics should be transformed into creative and critical responses to the chaos by performing them and showing how simple is to manipulate today. The example we have is the "Motley Masks" project where you become a jester signaling with your "mask" the official doctrine while camouflaging your practice (the traditional hand stitched motive supports the sentimental cult of sewing the masks to support adherence, but also hides the practice of spraying it with slivovitz to camouflage inhaling of alcohol as rebellion). This mask

as an example of jester strategies signals that we are both outside and inside of hierarchies and divisions, we are masking from the virus but maybe also camouflaging from the mask police and hiding our true intentions of dozing with our friends in secret gardens.

References

- Foucault, Michel. 2009. Security, Territory, Population. Palgrave Macmillan.
- Hutchinson, D. S. (Introduction). 1994.
 The Epicurus Reader: Selected Writings and Testimonia. Cambridge: Hackett.
- Kahn, Paul W. 2012. Political Theology Four New Chapters on the Concept of Sovereignty. Columbia University Press.
- Leibniz, G.W. 1985. Theodicy: Essays on the Goodness of God, the
 Freedom of Man and the Origin of Evil.
 Open Court Publishing Company.
 https://archive.org/stream/theodicy17147gut/17147.txt (October 18, 2020).
- -. 2005. Discourse on Metaphysics and The Monadology. Dover Publications.
- Parker, Wendy S., and Eric Winsberg.
 2018. "Values and Evidence: How Models Make a Difference." European Journal for Philosophy of Science 8(1): 125–42. https://link.springer.com/article/10.1007/s13194-017-0180-6 (October 18, 2020).
- Voltaire. Candide. https://www.gutenberg. org/ebooks/19942 (October 18, 2020).
- Winsberg, Eric. 2001. "Simulations, Models, and Theories: Complex Physical Systems and Their Representations." *Philosophy of Science* 68(3 SUPPL.). https://www.jstor.org/stable/3080964?seq=1 (October 18, 2020).

