



Pieter Bruegel the Elder, Triumph of Death (detail), c. 1562, Museo del Prado, Madrid

## *La Peste*

**B**ernard Rieux was a young physician in 1947, a surgeon, newly married and living in a comfortable apartment in the center of the city, close to the hospital where he worked. Each day, he would spend a few minutes chatting with his building's doorman, about gossip in the neighborhood, the doorman's family, life in general.

One day, Bernard's wife fell ill, and was sent to a facility outside the city for treatment. Soon thereafter, the doorman took ill, with a high fever, and quite suddenly, died. Dr. Rieux hardly had time to mourn, and with his wife out of town he focused on his work at the hospital.

After a long day of surgeries, Dr. Rieux stepped into the night and felt something squish beneath his foot. It was a dead rat. The next day, he saw more dead rats in the street, and feared this could soon become an epidemic. His thoughts raced to his doorman, whom he thought may have succumbed to bubonic plague, a preposterous notion since the plague had been eradicated for centuries, but Bernard reported his concerns to the city authorities.

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Given that there had been but one death, whose cause was undetermined, officials were not too concerned and did not want to alarm the public. Notices were posted about the government's steps to remove the dead rats and to warn citizens from touching them, but the official posture was optimistic, and people were encouraged to go about their lives.

You can imagine what happened next: a few deaths the next day, 10 more the following, 20 more the next day, then 40 the following day. Bubonic plague, as unlikely as that was, was spreading fast across the city. Officials sealed the city, no one allowed in or out. Months passed, and unrest grew in the populace. Some tried to escape and were captured and jailed, looting began, and martial law was imposed.

This story has obvious parallels to our present circumstances. At first, there was denial: either not recognizing the breadth of the coming catastrophe, or incapable of seeing events beyond the narrow lens of personal, political calculus, government officials minimized the threat in order to maintain normality, only to be forced to impose much more stringent restrictions as the epidemic grew.

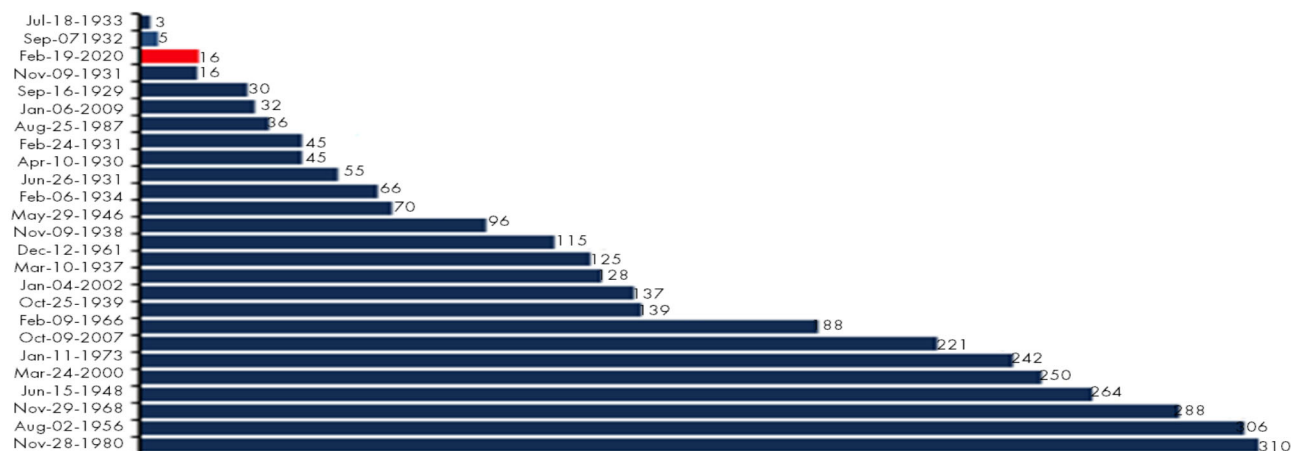
What we know of this previous calamity comes to us from Bernard Rieux's journal, and in the early days and weeks of the crisis, he observed that life in the city simply went on, "in appearance, nothing had changed," and he described people as "asleep on their feet," oblivious to the growing danger.

Bernard Rieux was a hero, but not a typical one. The lessons to draw from the plague that befell his city in his time have escaped us in ours, to our detriment and regret.

Unprecedented is a much overused word when "rare" or "unusual" is likely more appropriate. But investors would be forgiven for thinking that events of the past month were, indeed, unprecedented.

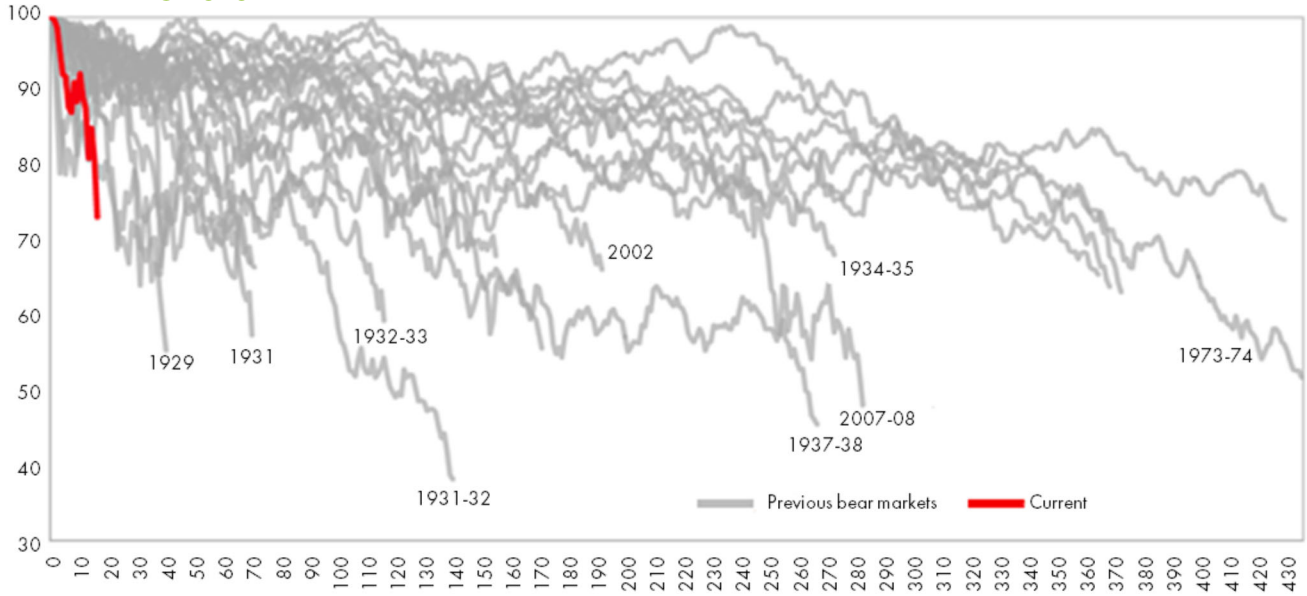
The flip from bull market to bear was fast: just sixteen trading days, February 19 to March 12, a drop of 20% (Chart 1), and just 22 days (to March 20) to

**Chart 1** Number of Days to Decline 20%, S&P 500 Index 1928-2020



Source: BofA Global Research, Bloomberg

**Chart 2 Peak to Trough Declines in Bear Markets, S&P 500 1928-2020**



Source: BofA US Equity & US Quant Strategy, Bloomberg

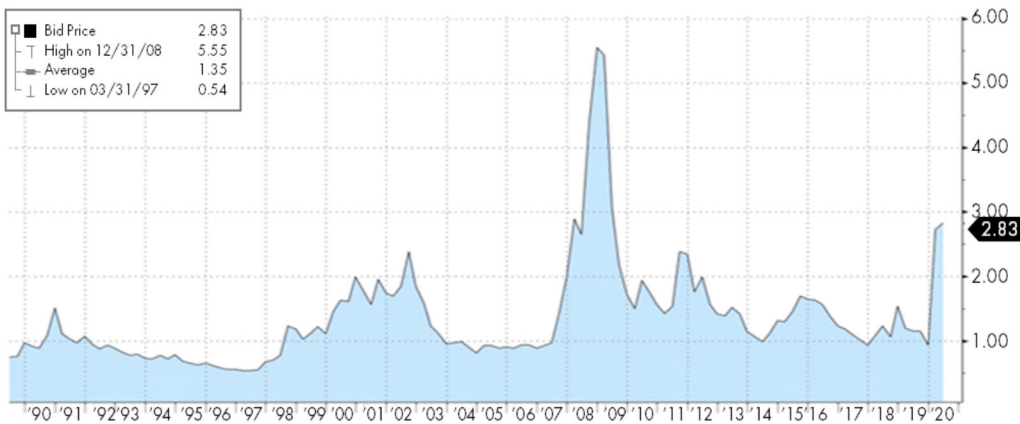
# of trading days since peak

drop a full 30% from its peak. This was the fastest bull-to-bear market in history (Chart 2).

Unprecedented moves were not limited to the equity markets. Ten-year Treasury yields hit an all-time low

of 0.31% on March 9, investment-grade corporate spreads jumped to their highest since the Global Financial Crisis (Chart 3) in a move that was calculated as a 12-sigma event.<sup>1</sup> The US dollar saw its largest

**Chart 3 Bloomberg Barclays US Aggregate Corporate Average OAS 1928-2020**



Source: Bloomberg Finance L.P.

<sup>1</sup> Sigma is the Greek letter used to notate the mathematical formula of standard deviation, a measurement of the dispersion of a set of values. A three standard deviation observation occurs less than 1% of the time, a twelve-sigma events occurs roughly never.



five-day gain since 1992 (ok, not unprecedented, but still extreme), and oil plunged 67% in the quarter, from \$62/barrel to \$20.

Unsurprisingly, volatility spiked to record levels. The sixteen days that saw the 20% decline from peak came with the highest volatility on record (Table 1) and a record daily high volatility on March 16 (Chart 4). If it seemed that

**Table 1** SPX Volatility During Bear Markets, 1928-2020

Start	End	Vol	Vol (1 <sup>st</sup> 15d)
16-Sep-29	13-Nov-29	71%	36%
10-Apr-30	16-Dec-30	30%	16%
24-Feb-31	2-Jun-31	28%	26%
16-Jun-31	5-Oct-31	39%	30%
9-Nov-31	1-Jun-32	45%	31%
7-Sep-32	27-Feb-33	51%	79%
18-Jul-34	19-Oct-33	52%	76%
6-Feb-34	14-Mar-35	24%	28%
10-Mar-37	31-Mar-38	24%	28%
9-Nov-38	11-Apr-39	26%	25%
25-Oct-39	10-Jun-40	20%	11%
7-Nov-40	28-Apr-42	15%	15%
29-May-46	19-May-47	21%	9%
15-Jun-48	13-Jun-49	14%	10%
2-Aug-48	22-Oct-57	12%	13%
12-Dec-61	26-Jun-62	18%	7%
9-Feb-66	7-Oct-66	12%	7%
29-Nov-68	26-May-70	11%	4%
11-Jan-73	3-Oct-74	18%	8%
28-Nov-80	12-Aug-82	14%	21%
25-Aug-87	4-Dec-87	54%	16%
24-Mar-00	21-Sep-01	22%	27%
4-Jan-02	9-Oct-02	26%	12%
9-Oct-07	20-Nov-08	36%	15%
6-Jan-09	9-Mar-09	38%	37%
19-Feb-20	12-Mar-20	63%	58%

**Chart 4** CBOE Volatility Index (VIX), Daily 1990-2020



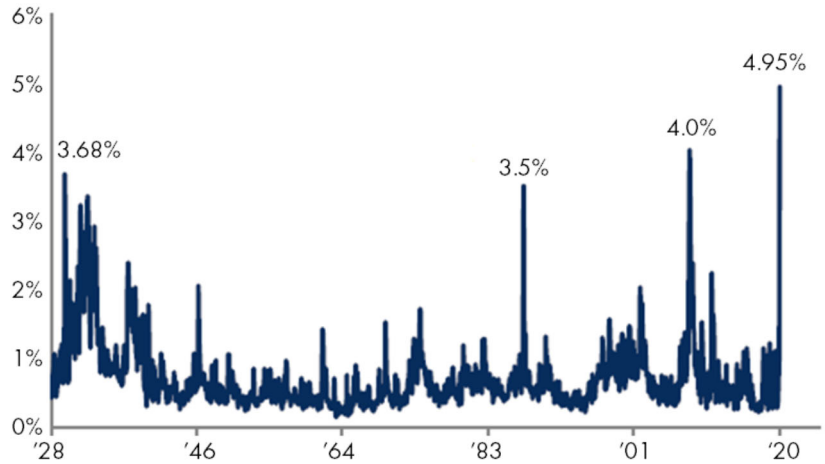
Source: Bloomberg Finance L.P.

<sup>1</sup> Sigma is the Greek letter used to denote the mathematical formula of standard deviation, a measurement of the dispersion of a set of values. A three standard deviation observation occurs less than 1% of the time, a twelve-sigma events occurs roughly never.

thousand-point swings on the Dow each day was common, it was: we experienced, by far, the largest daily volatility in history (Chart 5).

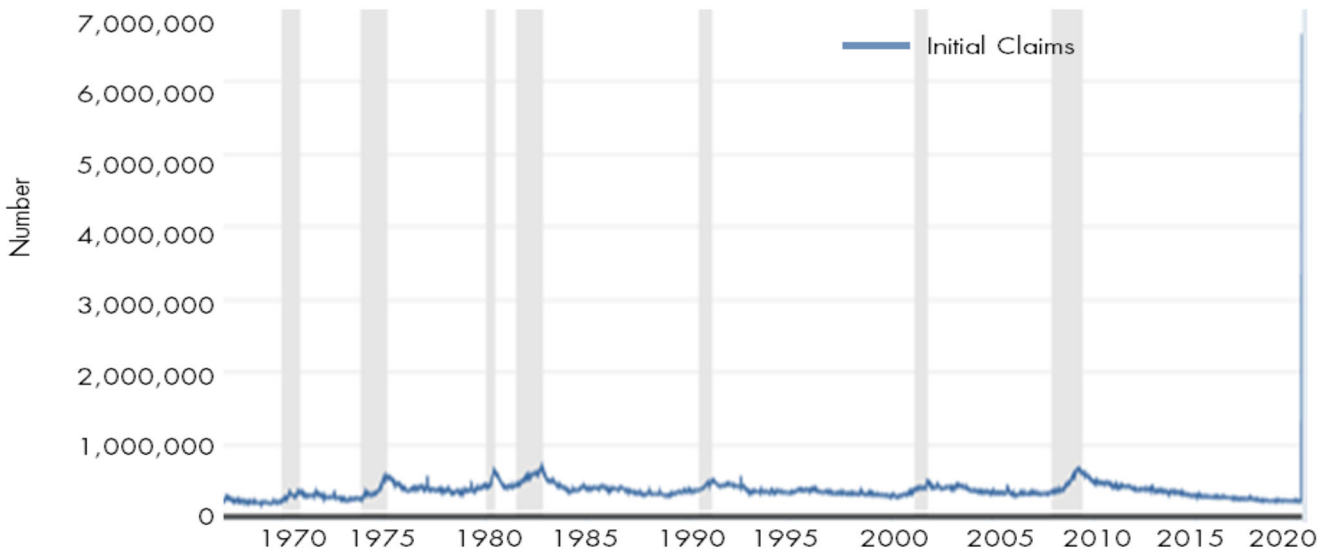
**M**arkets move ahead of hard data, and the swift, dramatic drops across markets presage an unprecedented economic downturn. For the week ended April 4, 2020, 6 ½ million people filed claims for unemployment insurance. Since records began in 1967, the previous high was 671,000 in 1982 (Chart 6).

**Chart 5 Average Daily Change, S&P 500 1928-2020**



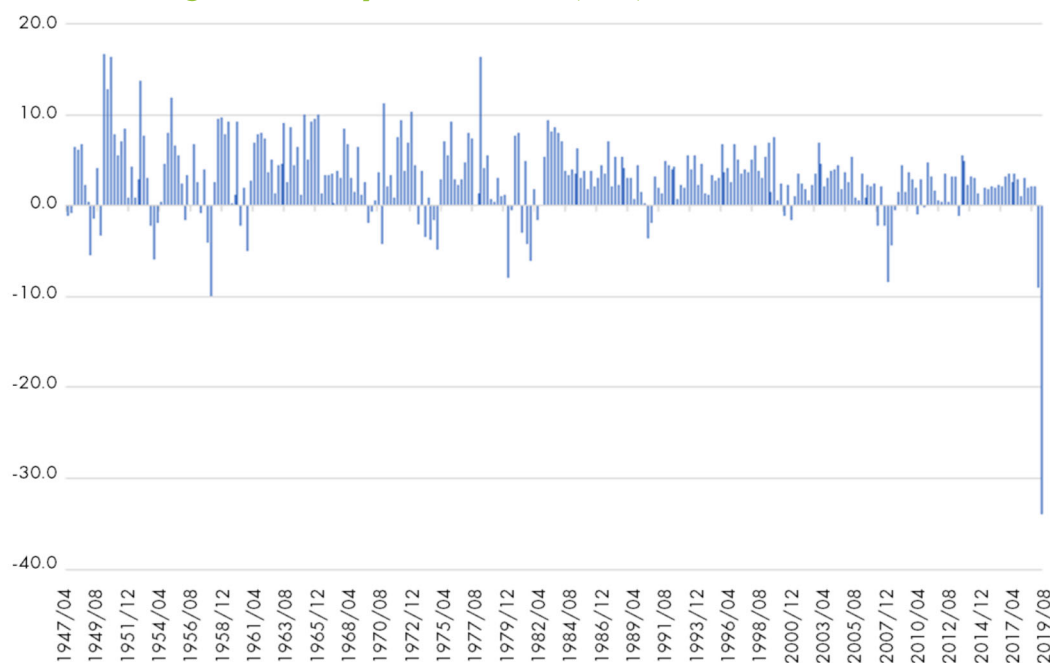
Source: State Street Global Markets, Bloomberg

**Chart 6 Unemployment Insurance Weekly Claims, 1967-2020**



Shaded areas indicate U.S. recession  
 Source: U.S. Employment and Training Administration  
 fred.stlouisfed.org

**Chart 7** US GDP, Compounded Annual Rate of Change, Quarterly, 1947-2020 (est.)



Source: U.S. Bureau of Economic Analysis, Real Gross Domestic Product [GDP], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/GDP>.

The unemployment rate rose from 3.5% (a 50-year low) to 4.4% in March, but this was just a foreshock of the quake to come. The most optimistic economists see unemployment rising to over 8%, most see it over 10%, some peg it over 15%.<sup>2</sup> Even more extraordinary are the estimates for GDP growth (contraction). GDP fell at an annual rate of 8.4% in Q4 2008, and at an annual pace of 10% in Q1 1958 (when there was another pandemic). Estimates for Q2 2020 range from a drop of 25% to 34% (Chart 7).<sup>3</sup> This would be comparable to 1932.

Economists expect this extraordinary economic contraction to be brief, with a strong rebound in economic activity in the second half of the year. We'll see.<sup>4</sup> What is clear is the false narrative around social dis-

tancing and the economy. It is incomprehensible that officials did not lock down the population until weeks after the outbreak. There are still voices, growing louder as the days pass, to relax the restrictions on movement in order to mitigate the economic damage.

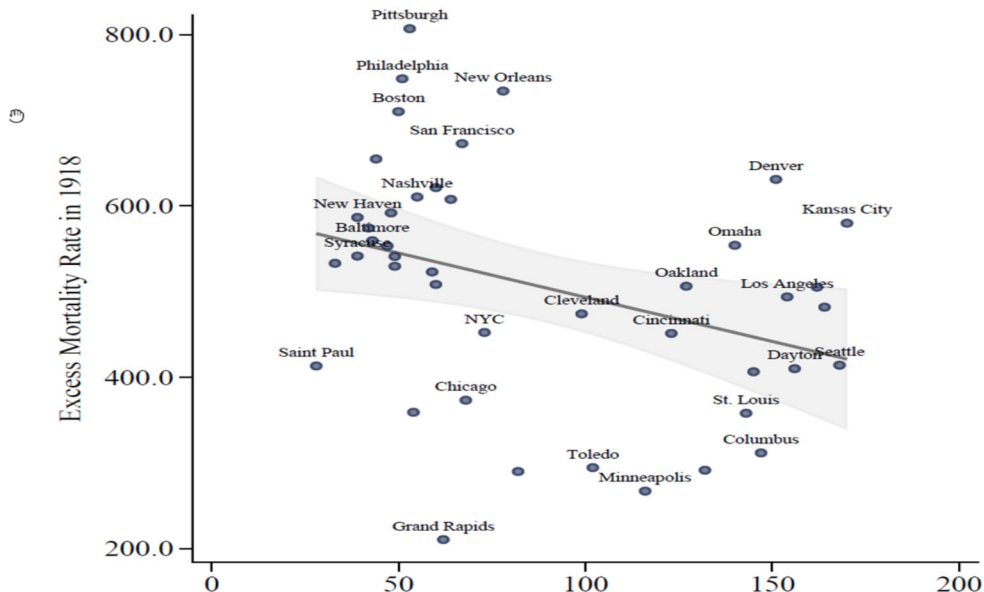
There are few historical analogies, but economists from the Federal Reserve and MIT examined the behavior and outcomes of major US cities during the 1918 Flu Epidemic that killed more than 600,000

<sup>2</sup> For example, J.P. Morgan forecasts a peak unemployment rate of 8.3% in 2Q, whereas BofA pegs it at 15.6%. The unemployment rate hit 10% in October 2009 and a post-war record of 10.8% in December 1982.

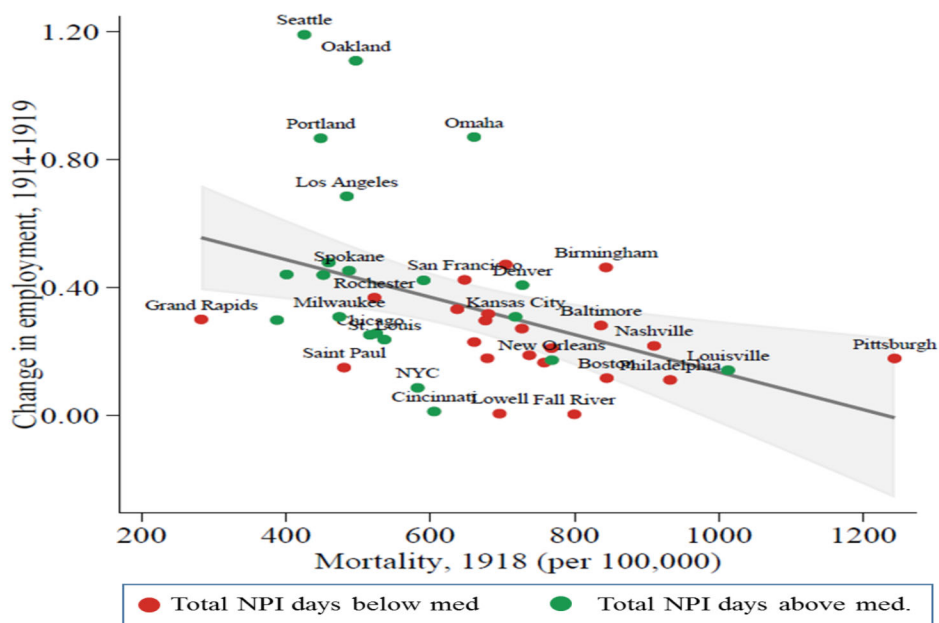
<sup>3</sup> Goldman Sachs economists see a 34% plunge in Q2 2020. Please note that these are annualized numbers for the quarter. The actual contraction would be approximately one-quarter of this estimate, still an extraordinary decline.

<sup>4</sup> Rather, "of course it will!" Goldman economists, most pessimistic on the downturn, are most optimistic on the upswing, looking for annualized jumps of 19% and 12% in Q3 and Q4, respectively.

**Chart 8 Excess Mortality and Total Number of Days of NPI**



**Chart 9 Change of Employment, 1914-1919 and Mortality in 1918**



Note: 1918 Flu Pandemic depressed the economy, but public health interventions did not. Dots represent city-level 1918 influenza mortality and manufacturing employment growth around the 1918 Flu Pandemic. Green (red) dots are cities with non-pharmaceutical intervention days above (below) the median fall 1918.

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Americans, 50-100 million worldwide. They found that cities that mandated social distancing longer (referred to as non-pharmaceutical intervention, NPI) had fewer deaths than cities that took weaker public health measures (Chart 8, page 7). That's not surprising, but cities with stringent containment laws also saw stronger economic growth than those who were more lax (Chart 9, page 7).<sup>5</sup> As the graph shows, Philadelphia and Pittsburgh were slow to impose public health restrictions and suffered the highest mortality and weakest growth in the country. Seattle, for example, benefitting from learning from cities on the East Coast, acted sooner, minimizing deaths and achieving a stronger economic recovery. The authors summed it up: "Our findings thus indicate that NPIs not only lower mortality; they also mitigate the adverse economic consequences of a pandemic." The message for us is clear: there is no trade-off between social distancing and economic recovery, the latter needs the former. Stay Home!

**R**ieux's diary details his long days at the hospital, his tireless rounds to care for people in their homes, the countless, hundreds, thousands of deaths he witnesses. He also shares his observations on how people have changed, how life has changed.

The plague heightens a sense of exile. Geographic exile, for sure, as citizens are isolated from each other and separated from loved ones beyond the city, as Bernard is from his wife. Toward the end, he learns that she has died, from causes unspecified, but irrelevant. The plague thus also brings on a spiritual exile, separating the living from the departed. Most profoundly, the plague provokes a temporal schism that separates people from their former lives. The past cannot return, and the present replaces the future, which cannot exist.

Rieux relates in his notebook a sermon from Father Paneloux, a Jesuit priest, that sees the plague as God's punishment for depravity. Another sermon, a few weeks later, calls the death of a child in the congregation a test of faith.

For Bernard Rieux, all this is absurd, from the priest's moralizing to the plague itself. All Rieux knows is that he must act to alleviate suffering and save lives, as best he can. He writes, "This whole thing is not about heroism. It may seem a ridiculous idea, but the only way to fight the plague is with decency," that is, just doing his job. He writes, "When you see the suffering it brings, you have to be mad, blind or a coward to resign yourself to the plague."

Rieux is telling us that the absurdity of life should not lead us to despair, but to action, away from moralizing and toward love. Love for our fellow human beings, whether or not we can lessen their suffering. Rieux believes, hopes, that the plague will unite the people in courage, as he writes, "No longer were there individual destinies; only a collective destiny, made of plague." And hopefully, "what we learn in time of pestilence is that there are more things to admire in men than to despise."

But make no mistake: life is absurd, death and suffering are absurd, and all the efforts, heroism and courage of people like Bernard Rieux cannot change this absurdity. We are powerless, but we are nonetheless compelled to act on the grounds of decency.

<sup>5</sup> *Pandemics Depress the Economy, Public Health Interventions Do Not: Evidence from the 1918 Flu*, Sergio Correia, Stephan Luck, and Emil Verner, March 26, 2020, <https://ssrn.com/abstract=3561560>.



**A**lbert Camus was an important actor in the French Resistance during the Second World War. He began writing his book in 1940 but put it aside during the war. He finished it in 1947 and it was widely acclaimed as an allegory of the Nazi occupation of France and of the collaborative Vichy regime. It was certainly that on one level, but Camus was aiming beyond politics to the more profound public evils of conformity and timidity, doctrine and complacency.

Camus ends *La Peste* with a warning for us in the future: "The plague bacillus never dies or vanishes entirely... it can remain dormant for dozens of years...and perhaps the day will come when, for the instruction or misfortune of mankind, the plague will rouse its rats and send them to die in some well-contented city."

Well, the rats have been roused in our time, in our well-contented city. Camus tells us we will be judged not by the lives we save, but by the efforts we make to help those in need. We can deny and excuse, bicker and blame, or we can comfort and console, sustain and support one another. Either way, the rats will return, but that's not the point. What matters is our decency.





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