



The New Holiday Play:
**Merry
SuperBugMas**

Antibiotic-resistant bacteria are popping up seemingly everywhere.



Disease Update: Bear-Market Stress is Weakening Society

By Alan Hall

We published our disease/epidemic study in the May and June 2009 inaugural issues of *The Socionomist* ([click here to download](#)). We concluded that for as far back as history provides data, social mood appears to have dramatically influenced the health of societies.

As it happened, our study was published near the bottom of a Primary-degree bear market and the onset of the Swine Flu pandemic. From an Elliott wave perspective, an even larger-degree trend toward negative social mood began a decade earlier, in March 2000, when the S&P 500 Index was some 19% higher than it is today. Elliotticians label this trend “Supercycle” degree, which is two degrees larger than the Primary-degree bear market mentioned above.

Society has been expressing this larger trend toward increasingly negative social mood through a variety of health-related symptoms. For example, our 2009 study said,

Stress—born of the same fear that drives stock prices lower, tanks economies and escalates foreclosures—also increases the risk of disease. ... Foreclosure—being forced out of your home—is one of the most disruptive and stressful financial calamities that a family can suffer.¹

Two years later in its October 2011 article, “Foreclosures Are Killing Us,” The New York Times echoed *The Socionomist*:

Foreclosure is not just a metaphorical epidemic, but a bona fide public health crisis A growing body of research shows that foreclosure itself harms the health of families and communities A paper released last month by the National Bureau of Economic Research found that people living in high-foreclosure areas in New Jersey, Arizona, California and Florida were significantly more likely than those in less hard-hit neighborhoods to be hospitalized for conditions like diabetes, high blood pressure and heart failure. ...

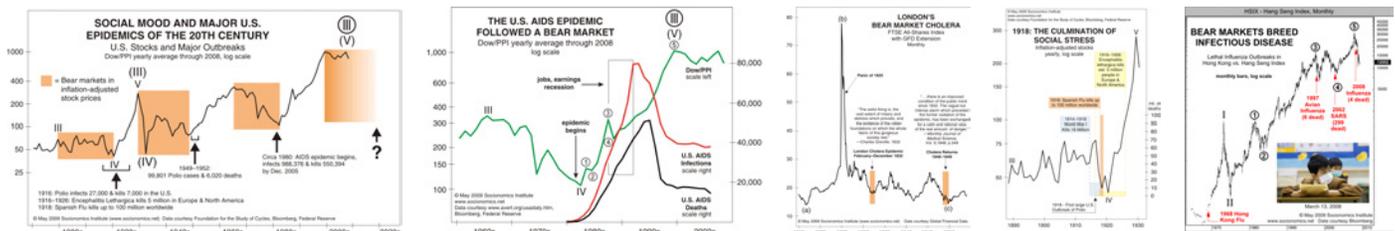
More than one-third of homeowners in our study had symptoms of major depression. The N.B.E.R. study found significantly more suicide attempts in high-foreclosure neighborhoods. For every 100 foreclosures, it found a 12% increase in anxiety-related emergency-room visits and hospitalizations by adults under 50. Losing a home disrupts social ties to neighbors, schools, jobs and health care providers—ties that under better circumstances promote good health.²

Indeed, our 2009 study showed foreclosure and flu maps of the continental United States, graphically illustrating the relationship between stress and susceptibility to disease.

Our study also said, “An extended bear market causes neurological change across a broad spectrum of

Key Graphics From Our 2009 Study

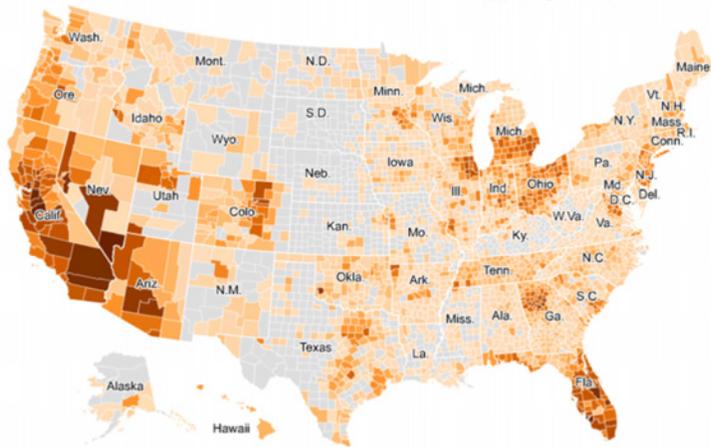
Our 2009 study revealed strong evidence that throughout history social mood has driven the occurrence of major epidemics. Below are several of the charts we presented in that study. Click on the individual charts below to enlarge each one, or click [here](#) to download the entire study.



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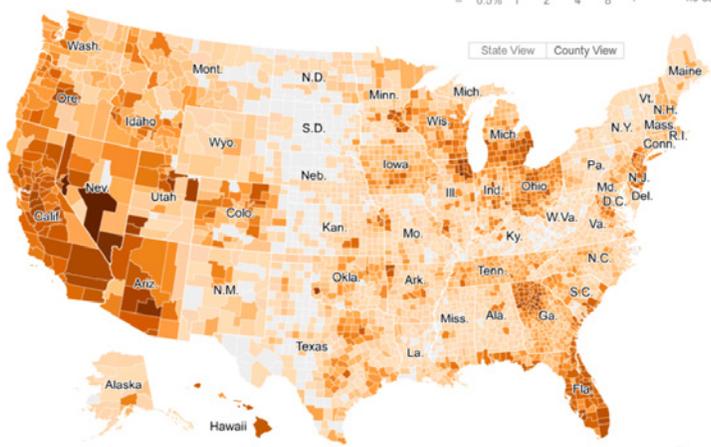
AP Economic Stress Index: Measuring financial strain by county

Stress Index Unemployment Foreclosure Bankruptcy People
Foreclosure rate: March 2009



AP Economic Stress Index: Measuring financial strain across the U.S.

Stress Index Unemployment Foreclosure Bankruptcy
Foreclosure rate: May 2011



Foreclosures Are Still Killing Us: *The foreclosure epidemic and consequent stress have visibly worsened since March 2009.*

society The effects of social stress will increase with the bear market.” We quoted the American Psychological Association:

The most chronic stressors—which change people’s identities or social roles, are more beyond their control and seem endless—were associated with the most global suppression of immunity; almost all measures of immune function dropped across the board. The longer the stress, the more the immune system shifted from potentially adaptive changes (such as those in the acute ‘fight or flight’ response) to potentially detrimental changes, at first in cellular immunity and then in broader immune function. Thus, stressors that turn a person’s world upside down and appear

to offer no ‘light at the end of the tunnel’ could have the greatest psychological and physiological impact.³

In other words, the longer and more extreme a period of stress, the more debilitating its impact on health.

How are we faring? In the 30 months since our initial study, society has indeed continued to flag. Let’s look first at various stressors from around the world and their link to social health.

The Mood Decline Has Undercut Society’s Well-Being

In various places around the world, it increasingly sucks to be human. The Christian Science Monitor recently wrote, “The standard of living for Americans has fallen longer and more steeply over the past three years than at any time since the U.S. government began recording it five decades ago.”⁴ Also in the U.S., the unofficial misery index—the sum of unemployment and inflation rates—is now at its highest point since 1983, which was just after the grueling 16-year Cycle-degree bear market. “The pace of change has been incredibly rapid and incredibly tough on the less educated,” says Mark Zandi, chief economist for Moody’s Analytics. Another economist says, “it appears large segments of the workforce have moved permanently into lower-paying positions.”⁴

The Gallup-Healthways Well-Being Index hit a 32-month low in October,⁵ and Federal Reserve data showed in December that “Americans got much poorer last quarter, as their collective household net worth suffered the biggest decline in three years.”⁶ A Marist Institute for Public Opinion survey finds that one third of Americans say their financial problems are chronic, and “64% of Americans worry that they won’t be able to pay their families’ expenses. . . .”⁴ For many, the light at the end of the tunnel is steadily dimming.

A recent survey by the UK’s Chartered Institute of Personnel and Development indicates that stress has now surpassed heart attack, stroke, cancer and back problems to become the most common cause of long-term sick leave. The survey describes strong links between job security, stress levels and mental health

problems.⁷ One U.K. professor goes so far as to say, “Stress is the 21st century equivalent of the Black Death.”⁸ (That may be an exaggeration, but chronic stress certainly does increase susceptibility to disease, as multiple studies show.)

Greece is a case study in the psychological impact of a negative mood trend. In June 2011, Time headlined, “The Greek Mental-Health Crisis: As Economy Implodes, Depression and Suicide Rates Soar.” Time said Greek psychiatrists recently reported a 25% to 30% increase in the number of patients. The Greek suicide rate increased by 18% from 2007-2009, with higher estimates for 2010. “The Greek identity has suffered a tremendous blow,” said one psychiatrist. “[People] are ashamed. The entire world today thinks that the Greeks are cheaters and the black sheep of Europe. This is very hard to accept.”⁹

In the United States, people also are increasingly sad. The CDC reported in October that Americans’ “use of antidepressant drugs has soared nearly 400% in the past 20 years,” making them the most frequently used medications by people ages 18-44.¹⁰ Mental health professionals cited several possible reasons for the spike, including the “struggling economy and the record number of layoffs and home foreclosures.” Medco Health Solutions recently reported,

More than one in four American women took at least one drug for conditions like anxiety and depression last year, according to an analysis of prescription data. [The] use of drugs for psychiatric and behavioral disorders in all adults rose 22% from 2001.¹¹

And for the second year in a row, in 2010 the number of U.S. soldiers who killed themselves exceeded those who died in combat.¹² July 2011 brought “the highest monthly toll ever recorded,” according to the National Journal.¹³ A CDC study recently found that the U.S. suicide rate for adults of working age rises during economic hardship and declines during prosperity. With laudable insight, the authors cautioned that the correlation could be non-causal: “... a third factor may increase the risk of both suicide and unemployment.”¹⁴

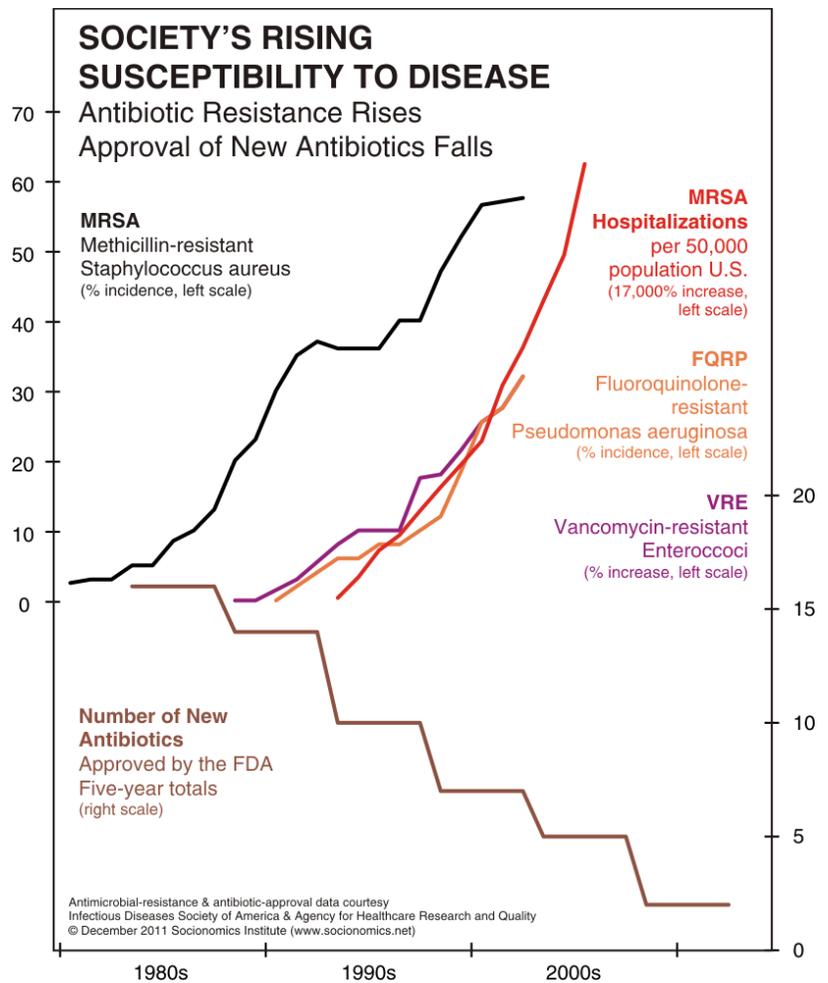


Figure 1

Socionomics holds that there is indeed a significant third factor, society’s mood, which influences both societal health and the economy.

A Perfect Storm of Mood, Malaise and Pathogens

Some of the health problems we face during a negative mood trend result from our behavior during the preceding positive trend. For example, our 2009 report said,

The breadth of the recent peak in social confidence is evident in decades of widespread complacent overuse of antibiotics and the consequent emergence of antimicrobial drug-resistant organisms. ... Complacency about disease may be the ultimate expression of overconfidence.¹



Source: northensun.com

Hold the Malaise: We wish it were as simple as a short order.

The four ascending lines in Figure 1 plot the percentage increase in rates of antibiotic resistance of three bacterial threats to public health and the rising rate of MRSA hospitalizations.¹⁵ The descending line shows the number of new antibiotics approved by the FDA. The dangerous divergence is largely due to two reasons, one biological and one profit-related: 1) antibiotics inevitably lose effectiveness over time—especially if overused—as bacteria evolve and adapt, and 2) short-course antibiotics are far less profitable for

pharmaceutical companies than are long-term drugs that do not lose effectiveness, such as cholesterol-lowering statins. Regarding profitability, a June 2011 article in *Drug Discovery & Development* said, “In 1990, nearly 20 large pharmaceutical companies were conducting antibiotic R&D. Today, fewer than five Big Pharmas retain active research programs.”¹⁶ Earlier this year, Pfizer announced deep research cuts, while Johnson & Johnson, the world’s largest pharmaceutical firm, dropped antibiotics research entirely.

Meanwhile, since our 2009 study, there has been a steady stream of new reports of rising antibiotic resistance in old enemies.

The Italian Association of Microbiologists says 15,000 Italians per year get dangerous, drug-resistant infections in hospitals. According to the *Independent*, infection outbreaks can be so virulent that “Sometimes the only solution is to close the hospital.”¹⁷ In April, researchers warned, “gonorrhea is increasingly developing resistance to all of the antibiotics we have to treat it in the United States.”¹⁸ In July, scientists found “superbug” gonorrhea in Japan that is resistant to all recommended antibiotics and could become a global public health threat.¹⁹ In May, bedbugs carrying antibiotic-resistant MRSA appeared in Vancouver.²⁰ In June, Europe was hit with an “entirely new super-toxic”²¹ strain of *E. coli* bacteria, a food poisoning outbreak that spread to at least 10 countries and in Germany alone sickened 3,816 and killed 54.²² In August, on the same day that scientists identified *S. Kentucky*, a new salmonella superbug they fear may spread globally, U.S. officials reported a multi-state outbreak of *S. Heidelberg*, a dif-



Source: Wikimedia

A Post-Antibiotic World? This 1944 poster expresses excitement about penicillin’s transformation of human immunity. If the era of effective antibiotics ends, common surgeries will become unacceptably dangerous, and minor injuries and infections will kill.

ferent strain of antibiotic-resistant salmonella.²³

In October, *Scientific American* reported that MRSA ST398, a strain of drug-resistant *Staphylococcus aureus* first identified in pigs in the Netherlands in 1994, was “recently found in about half of the pigs and farmers tested in Iowa.” The article says, “The rate of human [ST398] infections is going up in Denmark and the Netherlands ... We are just looking at the beginning of an epidemic.” Some of the cases cannot be linked to livestock, suggesting that the bacterium has evolved human-

to-human or other transmission capability. *Scientific American* wrote that the 29 million pounds-per-year of active antibiotics used in U.S. food animals have resulted in “a profitable meat industry ... but also one of the most effective systems for the evolution and transmission of antibiotic-resistant strains of bacteria that an engineer could devise.”²⁴

On November 17, 2011, The European Centre for Disease Control and Prevention said, “the percentage of carbapenem-resistant *K. pneumoniae* has doubled from 7 per cent to 15 per cent. ... [It] is ‘particularly worrying’ because carbapenems are the last-line antibiotics for treatment of multi-drug-resistant infections.”²⁵

New multi-drug-resistant microorganisms, such as gram-negative bacteria, are evolving at a stunning pace as well. One pathogen that originated in India, New Delhi Metallo-Beta-Lactamase (NDM-1), is not a bacterium at all, but a bacteria-produced *enzyme*. Some strains of bacteria can transfer the gene for NDM-1 production to other strains via horizontal gene transfer, which is essentially a non-reproductive, natural form of genetic engineering. Transmitted via food, water and human contact, NDM-1 makes bacteria resistant to a broad range of antibiotics, including powerful last-resort antibiotics. NDM-1 is increasingly common in the U.K., and the CDC identified it in three U.S. states in June 2010.²⁶

The Rising Potential for a Syndemic

The diverging trends depicted in Figure 1—the increases in drug-resistant bugs versus the decline in the number of new antibiotics—have roots in decades

of complacency about the threat of infectious diseases. But the critical, take-home point is the *timing*. This chink in society's immunological armor has begun to widen just as social mood is set to plunge further and create a legion of fears, problems and stressors. In fact, our 2009 study warned of a coming "syndemic," a combination of ills—such as poverty, hunger, stress, violence, diseases and lack of medical care—that amplify declines in social welfare and create what epidemiologists call an "excess disease burden" on the population:

A spiraling decline in social mood stacks [relatively] minor stressors—such as subprime defaults and falling stock prices—atop bigger stressors, such as job losses and falling house prices. This enables future stressors—crowding, homelessness, family violence and depression—all of which increase the risk of epidemic disease.

This is the same conclusion reached by two researchers, Johannes Krause and Hendrik Poinar, who recently led a team that unearthed and fully sequenced the ancient DNA of *Yersinia pestis*, the suspected cause of 14th century Europe's Black Death. The researchers found the ancient DNA to be genetically identical to that of modern *Yersinia*, which still infects thousands of people each year and produces similar symptoms but spreads slowly and is far less virulent. Krause speculated, "[Perhaps the] Black Death behaved differently from modern *Yersinia* infection due to Europeans' total lack of previous exposure. Another possibility is co-infection with other pathogens, a so-called syndemic."²⁷ Poinar made it even clearer:

For a long time we thought the bug was the culprit ... but now we suspect that the interplay between the disease and humans was what made the medieval plagues so devastating. Fourteenth century London was crowded, cold and damp. Large parts of the population were malnourished and many were carrying other diseases, such as the flu. Then suddenly the plague arrives with the merchant ships from Southern Europe. It was a perfect storm.²⁸

Such conditions were not present in 2009 during the swine flu pandemic, which nevertheless killed thousands of people and "fulfilled every scientific condition for a pandemic."²⁹ Should they be present next time, the ca-

sualties should grow by multiples. And conditions are changing in ways that could favor the development of such a syndemic. As we noted in 2009, "The bear market will bring some degree of breakdown in the health care system." Deflationary conservatism will squeeze hospitals, physicians, pharmaceutical companies and Medicare even as health and social crises arrive from multiple directions. Already we see warning signs. According to a report on NPR, drug companies and doctors have rationed critical drugs whose demand has outstripped supply for short periods, including "a wide range of medications: cancer chemotherapy agents, anesthetics, antibiotics, electrolytes needed for nutrient solutions, and dozens more."³⁰ In fact, The New York Times wrote, "at least 180 drugs that are crucial ... have been declared in short supply—a record number. Prices for some [of them] have risen as much as twentyfold."³¹

Our study said, "The ebbing tide of social mood will reveal even more [food-safety] laxity and cause even more hardship." The same is true of drug safety, as the bear market has already forced hospitals to use substandard suppliers. NPR reported, "[Nine] Alabama patients died and 10 others got seriously ill after getting bacteria-contaminated intravenous feeding solutions made by local pharmacies."³⁰ The elderly—a large segment of the rapidly aging demographic—are major consumers of health care resources. Old people are more likely to suffer from chronic and disabling disease, and many depend on multiple prescription drugs for quality of life, and even life itself. Even without an epidemic, these people and the health-care system are highly vulnerable to supply-chain disruption.

According to a September Time article, Dr. Irwin Redlener, the director of the National Center for Disaster Preparedness said, "when it comes to public health, we may actually be worse off than we were a decade ago. ... There have been tremendous cuts in virtually every program that has to do with preparedness." Time also summarized a new report by the Trust for America's Health and the Robert Wood Johnson Foundation:

- Thirty-three states have cut funding for public health, with 18 of those states cutting funding for two years in a row.
- Local public health departments have cut about 29,000 jobs, representing 19% of the public health workforce.

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- Federal support for public health preparedness has been slashed by 37%.
- The United States has 50,000 fewer public health workers than it did 20 years ago, and one-third of public health workers may retire within five years.
- The medical system's ability to care for a "massive influx of patients remains one of the most serious challenges for emergency preparedness."³²

Recognition is Dawning

The influence of the post-2000 negative trend in social mood on the U.S. healthcare system is becoming clearer. As the trend continues, researchers will increasingly recognize the strong connection between social mood and societal health. Researchers will likely begin with the erroneous idea that the flagging economy, not negative mood, is the underlying cause of the decline in collective health.

"Prolonged Illness Found Among Idle [Unemployed]," headlined The New York Times in April 1933, in the pit of the Great Depression. The article described a New York State Health Department study of "1,600 families chosen at random from the files of public welfare agencies." The researchers found higher morbidity rates than had two previous studies, one of which was conducted ten years earlier:

Sickness is unusually prevalent among the more than 300,000 families on the public relief rolls in the State. ... Individual illnesses among the unemployed families, although only slightly more numerous than normal, were unusually prolonged, more than 40% of those disabled by illness on the day of the survey having been ill for more than a year.³³

Jumping ahead to 2011, research by evolutionary scientist Randy Thornhill has developed a fascinating "'parasite stress' model of human society, which considers all disease to be a parasite on human society":

He has already used it to predict that people in disease-ridden regions will be more xenophobic, and prefer to associate with relatives and close neighbors. These "collectivist" societies opt for strongly conservative values and autocratic governments, which Thornhill says minimizes the risk of contracting diseases. By contrast, people in countries with low disease rates tend to be more individualistic and democratic... . Thornhill [with a colleague] has now found a link be-

tween disease and violence. The pair compared murder and disease rates from 48 US states and found that high disease rates correlated with high murder rates.³⁴

Social Fear Threatens Medical Science

Scientists are striving to understand a long list of primary pathogens with pandemic potential. For example, H5N1 bird flu, a lethal virus that is scarily similar to the 1918 flu that caused the deadliest global pandemic ever recorded, currently cannot spread easily among mam-

Researchers will increasingly connect social mood and societal health.

mals. But researchers recently demonstrated that "five mutations in just two genes have allowed the virus to spread between mammals in the lab. Scientists note that "the virus is just as lethal despite the mutations."³⁵ Controversy is brewing over whether these scientists should be allowed to publish their complete methodology via the Internet.³⁶ The common practice of widely sharing research to better human health may become a casualty of the negative social mood trend. People increasingly fear such "dual use" research could also enable terrorists to make powerful biological weapons.

Here's another example. The Washington Post reported on December 8:

Imagine computer-designed viruses that cure disease, new bacteria capable of synthesizing an unlimited fuel supply, new organisms that wipe out entire populations and bio-toxins that target world leaders. They sound like devices restricted to feature-film scriptwriters, but it is possible to create all of these today, using the latest advances in synthetic biology.³⁷

Scientists at Celera Corporation used the "equivalent of a laser printer that can 'print' DNA" to assemble the first-ever synthetic life form in May 2010. The Post wrote, "Prices are falling exponentially. ... Eventually, like laser printers, DNA printers will be inexpensive home devices."

Security futurist Marc Goodman wrote on his website, "In effect, the human genome is merely another operating system waiting to be hacked."³⁸ He warned of new custom-designed bioterror pathogens that could target the genome of an individual or a group. "Bio-crime today is akin to computer crime in the early 1980s," Goodman said. "Few initially recognized the problem, but one need only observe how the threat

grew exponentially over time.” Increasingly negative social mood recasts technological boons as threats, meaning that science may soon be constrained by the same authoritarianism that is shutting down portions of the Internet.

The intersecting trends of rising fear and scientific denialism—socioeconomic traits of bear-market thinking—are also evident in the anti-vaccine crusade and in accusations that the 2009 swine flu pandemic was actually a hoax, a conspiracy by vaccine profiteers. Try telling that to the families of the flu victims. Should another pandemic erupt near the next major low in social mood (EWI has forecast the end of Supercycle wave (a) in 2016), a syndemic is likely and hoax charges are unlikely, as there will be far too many victims to ignore.

The Mood Decline Is Endangering Kids and Society’s Future Well-Being

Doctors at the Boston Medical Center and in four other big cities say they are “seeing more hungry and dangerously thin young children in the emergency room than at any time in more than a decade of surveying families. ... chronic hunger threatens to leave scores

Rising child abuse means that today’s declining social mood is endangering tomorrow’s social vitality.

of infants and toddlers with lasting learning and developmental problems.”³⁹ The child poverty rate has been trending higher since the 2000 social mood peak. “The State of America’s Children 2011,” a Children’s Defense Fund report released in July, revealed other stressors of the young resulting from the negative mood trend:

- The number of homeless children and youth in U.S. public schools increased 41% from 2006 to 2009.
- The number of children [in households that receive] food stamps rose rapidly since 2000 to reach a record 15.6 million children in 2009.
- The number of children who fell into poverty between 2008 and 2009 was the largest single-year increase ever recorded.⁴⁰

Poverty is not the only bear-market monkey on children’s backs. Parents tend to grow more neglectful and abusive in a negative mood trend. Our June 2009 study noted,

Today’s bear market is already damaging the youngest generation. The May 21 Miami Herald reports that the severity of child abuse, the number of child deaths and the number of cases of shaken baby syndrome have all increased while the markets have fallen. A May 20 CBS News story reports that children’s hospitals in Phoenix, Pittsburgh, Boston, and Seattle have seen 20 to 40% increases in child abuse cases in the past year, and that in Beaufort, South Carolina, where unemployment in a five-county area is up 700%, child abuse cases have increased 64% over the past year.

Health Day reported on a study in the October 2011 issue of Pediatrics:

A new study examined the rate of abusive head trauma [AHT] seen among kids under age five in various U.S. locales from 2004 to 2009. Researchers found that the rate of such trauma rose from about nine per 100,000 children to nearly 15 per 100,000 during that time period—coinciding with the onset of the recession and massive job losses.⁴¹

Other research teams reported a doubling of abusive head trauma during the recession. The authors of the Pediatrics study concluded:

The rate of AHT increased significantly in 3 distinct geographic regions during the 19 months of an economic recession compared with the 47 months before the recession. This finding is consistent with our understanding of the effect of stress on violence. Given the high morbidity and mortality rates for children with AHT, these results are concerning and suggest that prevention efforts might need to be increased significantly during times of economic hardship.⁴²

Teens and young adults express the rising stress in an “alarming new trend,” according to a February 2011 Pediatrics study:

[Teens are] creating and sharing YouTube videos about cutting, burning or otherwise harming themselves—and even demonstrating techniques. ... Young people say they do it to cope with stress or traumatic experiences ... Most do it in secret, hiding scars under long-sleeved shirts and confiding only in anonymous people online.⁴³

The researchers say YouTube provides self-destructive teens a community of support that normalizes the behavior. And it’s not just YouTube. “Other websites

promote anorexia, autoerotic asphyxiation, even how-to guides for suicide,”⁴³ said USA Today.

Earlier in 2011, the media blamed the languishing economy for rising rates of reported child abuse. Now, armed with a new report from the Department of Health and Human Services,⁴⁴ they say there is no such relationship. Yet, data in that report show that child abuse fatality rates rose by 40% between 1999 and 2008. Socionomists posit that the negative trend in social mood influences both the economy *and the severity of child abuse*.

Children suffer increased physical and psychological stress in bear markets, prolonging the legacy of a major mood decline.

Two Pedophile Scandals Display Socionomic Timing

It is no surprise to socionomists that a major child sexual abuse scandal, such as the one that recently engulfed Penn State, went unreported during the bull market but finally erupted during a negative social mood trend. As the June 2002 issue of *The Elliott Wave Theorist* observed about the Enron scandal, “During the bull market, few cared. There was consistent misbehavior for a decade, but there was no scandal until well after the trend changed.”

The same psychology has been operative at Penn State. Former coach Jerry Sandusky’s alleged sexual predation of young boys spanned several mostly positive-mood decades, and the current negative mood trend has only now drawn back the curtain on his misdeeds. Megan McArdle, senior editor for *The Atlantic*, struggled to understand the cover-up that followed the Sandusky affair:

I cannot imagine how a bunch of people somehow tacitly agreed not to do anything about it. ... We’re all still left with a large, unanswered “why?” I am fundamentally a cynic: I believe that people will do almost any awful thing. But I need a reason. And I cannot find one in any of this.⁴⁵

Child Abuse Rates
Light blue: 1970s; dark blue: 1990s

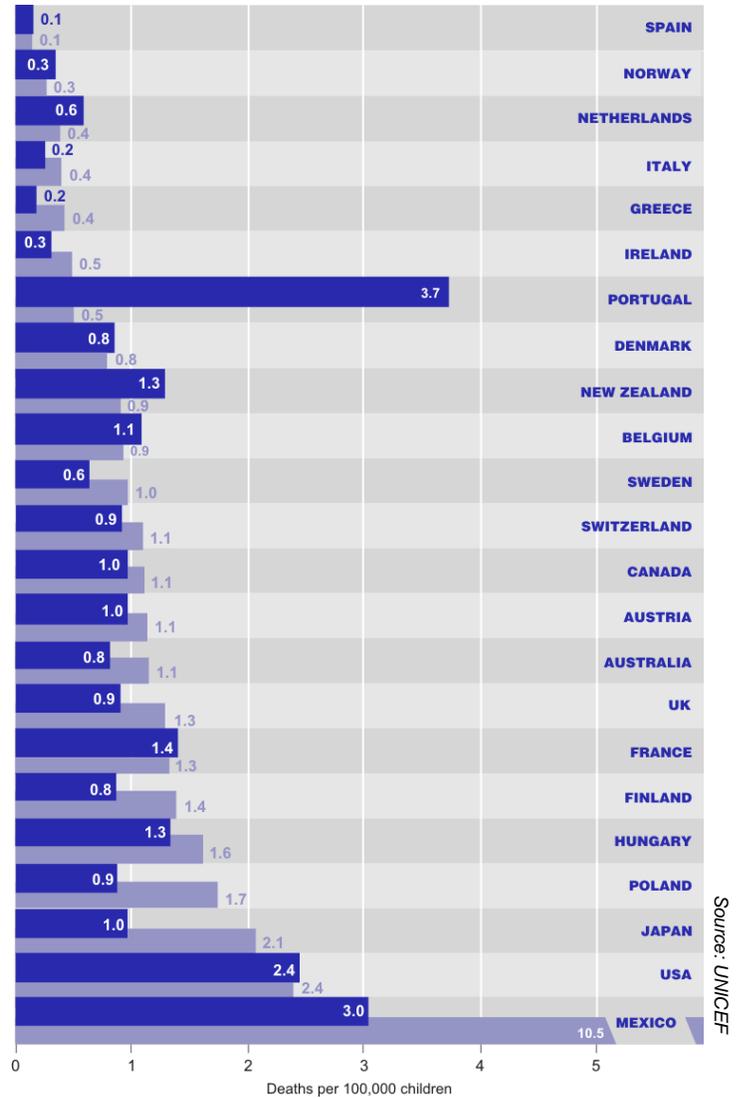


Figure 2

Source: UNICEF

Socionomics not only provides that reason but essentially predicted the behavior.

The Associated Press got closer to the reason when it noted similarities between the Penn State saga and the child sexual abuse scandal that rocked the Catholic Church in the early 2000s. “The sort of instinct to protect the institution is very similar,”⁴⁶ said author Philip Lawler. And it held intact all during the bull market.

Bonus Audio Interview

For Matt Lampert, the Institute’s research fellow at the University of Cambridge, 2011 was a very special year. Matt completed a three-month internship at the International Institute for Applied Systems Analysis in Vienna, Austria, where he had the opportunity to work on a research project with Dr. John Casti, author of the book, *Mood Matters*. Recently, Matt sat down with Mark Almand, director of the Socionomics Institute, to discuss his experiences in Austria. Their casual interview is available free to subscribers by clicking [here](#).

Then, during a negative mood phase, heading toward the stock market low of 2002, the Boston Globe widely exposed the Catholic scandal and won a Pulitzer Prize. Fox News reported on December 5 of this year that the Hollywood film industry might also have a history of child abuse hidden away; if so, expect more of it to surface.⁴⁷ Why? As increasingly negative social mood desanctifies one institution after another—banks, Wall Street, democracy, capitalism, education, the Federal Reserve—abused or aggrieved individuals finally find anger, courage and supportive outrage from others, inducing them to speak out, and the public is disposed to seek vengeance.

And finally, here is an international survey that shows child abuse rates fluctuating with social mood. Figure 2 is one of UNICEF's Innocenti Report Cards.⁴⁸ For each country listed on the right, two bars show two different five-year averages of the annual number of deaths from maltreatment per 100,000 children under the age of 15 years. The pale bars show rates for a five-

year period in the bear-market 1970s. The dark bars show five years in the bull-market 1990s, which saw improvement in the majority of the 23 industrialized nations. UNICEF summarized the 1970s-1990s bear-to-bull improvement:

[In] 14 of those countries, the rate of child deaths from maltreatment has fallen, in some cases steeply. In a further four countries the rate has remained stable and in five countries there has been an increase (though in all except Portugal the increase is so small as to be of little statistical significance).

If EWI's social mood outlook proves correct, this trend will reverse. We believe an understanding of socioeconomic causality can help scientists solve the mystery behind such changes. Complicating the outcome, however, will be the concurrent tendency of negative social mood to increasingly cast the scientific method itself as suspect.⁴⁹

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