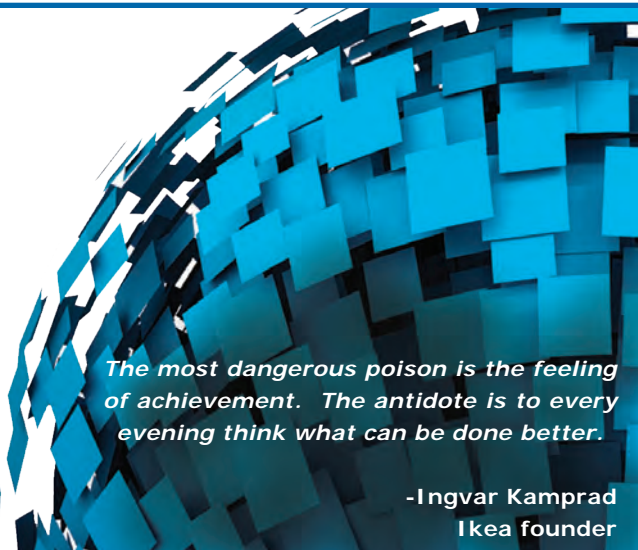


DID YOU KNOW?

- The total value of canceled U.S. merger and acquisition deals in the first five months of 2016 reached \$378 billion, already a record total for any year. Pfizer called off its "inversion" deal with Ireland-based Allergan, accounting for \$150 billion. (*The Week*, 5/20/16)
- Roughly 1.63 million people in the top 20 percent of earners made part of their income using the "gig economy," like Uber and Airbnb, between October 2014 and September 2015 – more than 150,000 than did so in the bottom 20 percent of earners. (*The Week*, 5/13/16)
- In 1990, China accounted for just three percent of global manufacturing output; today it produces almost 25 percent, including 80 percent of all air conditioners, 71 percent of all mobile phones and 63 percent of the world's shoes. (*MIT Technology Review*, 6/16)
- A Buddhist temple on the edge of Beijing has developed a robot monk, Xian'er, who can chant mantras and answer 20 questions displayed on the touch screen on its chest about Buddhism and daily life at the 500-year-old temple. (*Guardian Weekly*, 5/16/16)
- Between 2010 and 2014, America's population grew by 3.1 percent. The population in U.S. cities grew by 3.7 percent, while the population of the 50 richest cities increased by 9.2 percent. (*Economist*, 3/12/16).
- In April, Indonesian authorities blew up 23 foreign vessels that were captured for fishing illegally in the country's waters. In total, 174 illegal fishing boats have been blown up following Jakarta's declared fishing moratorium for foreign vessels in Indonesia waters. (*Associated Press*, 4/5/16)
- The percentage of teens purchasing plus-size clothing jumped from 19 percent in 2012 to 34 percent in 2015. (*Investor's Business Daily*, 4/1/16)
- Between 1990 and 2014, the U.S. labor force participation rate for men between the ages of 25 and 54 fell more steeply than in all but one other country in the OECD. The U.S. rate for this group is 88.5 percent, the third lowest among 34 OECD nations. (*Financial Times*, 6/20/16)
- In April, San Francisco became the first city in the U.S. to approve six weeks of fully paid leave for new parents, including mothers and fathers, same-sex couples and those who either bear or adopt a child. The U.S. is one of two countries out of 185 listed by the International Labor Organization that do not have a national law providing some form of paid parental leave. (*New York Times*, 4/5/16)
- Baby boomers who rent, rather than own their homes, accounted for more than half of the nation's renter growth in the last 10 years. (*Chicago Tribune*, 4/2/16)
- A six-rotor drone successfully made the first fully-automated package delivery to a residential location along a pre-programmed route in a small Nevada town in March. Meanwhile, last year, there were at least 241 reports of close encounters between drones and manned aircraft, including 28 in which pilots had to veer out of the way. (*Associated Press*, 3/25/16 & 3/27/16)
- As of January 1, 43 percent of the roughly 22 million Americans with federal student loans totaling \$200 billion were either behind or received permission to postpone payments due to economic hardship. (*Wall Street Journal*, 4/7/16)



The most dangerous poison is the feeling of achievement. The antidote is to every evening think what can be done better.

-Ingvar Kamprad
Ikea founder

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□ Additive Manufacturing Adds Up

At the June 2016 International Aerospace Exhibition in Schöenefeld, Germany, Airbus unveiled Thor, the world's first 3D-printed aircraft. The windowless drone, which weighs 46 pounds and is less than 13 feet long, was completely printed, except for the electrical elements, using a substance called polyamide. Thor is just one example of types of products now being created using 3D printing, which is increasingly utilized in both prototyping and industrial manufacturing. Recent technological advances allow new 3D printers to use materials that were previously unusable and have facilitated the printing of larger pieces in shorter periods of time. While 71 percent of U.S. manufacturers claim they are already using 3D printing in some way, these new advancements suggest the technology will continue to see significant growth ahead. (**Context Update**)

□ Consumer Dynamics and Resulting Effects

While employment and consumer-spending numbers continue to fluctuate on a month-to-month basis, the realities of what we have called the Actual New Economy (*e.g.*, automation and robotics, gig economy, smaller middle class) have created a significant secular shift in consumer attitudes, behaviors and preferences. These fall into four secular dynamics currently operating within the consumer realm: (1) a **New Consumer Value Hierarchy** reflects consumer behavior that values Restraint, Simplicity, Connectivity and Experience; (2) young adults are leading a **redefinition of Adulthood** through a new set of operational priorities to match and guide them; (3) individuals are reassessing the actual conditions and causes of today's harsh realities and many are subsequently engaging in activities **to promote Sanity**; (4) some individuals are shifting their efforts from a principal focus on expanding their standard of living to a more concentrated focus on expanding their experiences and engagement in order **to create a Better Life**.

At the same time, there are three cyclical changes that suggest both opportunity and risk in the short-term: (1) post-Great Recession [consumption] growth has been driven by households in the top 20 percent of the income scale, buttressed in large part by the increases in the equities markets. **There's a Lot Resting on Equities** because the "wealth effect" of a rising stock market encourages spending among those benefiting from stock price increases and dividends; a correction would likely result in public company executives doubling-down on their efforts to manage earnings through layoffs; (2) the vast middle and working classes today are dealing with **Three Squeezes**, including stagnant incomes, increasing rents and rising healthcare costs; and, (3) individuals

have developed **Coping** tactics to help them deal with the harsh realities of contemporary work, economic conditions and global interactions.

Understanding the interplay of the secular and cyclical dynamics will be important as they will be significant drivers for consumer spending on goods and services for years to come. (**Personal Briefing**)

□ CRISPR Research for Crisper Produce, and Other Leaps of the Genetic Age

By using a relatively new gene-editing tool called CRISPR, researchers recently were able to "delete" the browning gene in mushrooms to create one that can last longer and potentially reduce food waste. Since this form of gene therapy did not add a new gene to the mushroom, the new product is not considered a GMO, *per se*, and the U.S., Department of Agriculture (USDA) consequently, proclaimed the new mushroom safe to eat. This is but one example of the vast, growing assortment of genetic enhancements being made to food, and even animals, which are simultaneously becoming a proving ground for gene therapies to treat human disease. The USDA approval also exemplifies an increasingly permissive and open regulatory environment which is allowing more modified foods to be sold and consumed by the public.

China has less-stringent regulations than the U.S. on genetic modification, cloning and stem-cell use. The country is also home to the world-class gene-sequencing Beijing Genomics Institute (BGI) and a desire to become a global center of biotech innovation. Scientists there are moving ahead with genetic enhancements to animals, especially those in the human food chain, and have already used CRISPR to develop a cashmere goat that produces longer hair. Plans are also underway at a private company to clone 100,000 cow embryos in an assembly-line process and to genetically modify cows so they do not grow horns, thereby eliminating the "dehorning" process now in use.

Modifications to food seem to foretell imminent genetic modifications to people, primarily for the purpose of curing genetic diseases. So far, CRISPR has been used to cure several diseases in mice. However, the use of such gene therapy can be quite controversial in humans, as ethicists are worried that such research could lead to a permanent change in the makeup of the human species. Indeed, most of the world's scientific community has called for a moratorium on altering the genetic makeup of a human embryo until it is better understood. Yet, this hasn't stopped some labs in China, where some scientists are conducting experiments with human embryos, so far with some unwanted results. (**inF 1105**)

□ Military Arms for Image and Profit

In the year since our *Briefing* on the subject, both Russian and Chinese leaders have clearly continued with their Propaganda of Power. Russia's military move into Syria last year was intended to demonstrate Russian military prowess, and it seemed to open the eyes of those in the U.S. military and its NATO allies. Six months ago, President Putin said, "It is one thing for the experts to be aware that Russia supposedly has these weapons, and another thing for them to see for the first time that they do really exist....They have seen, too, now that Russia is ready to use them if this is in the interests of our country and our people." A report the same month from the European Council on Foreign Relations claimed that "Russia is now a military power that could overwhelm any of its neighbors, if they were isolated from Western support." Only one month later, in a November speech about China's military restructuring, President Xi Jinping claimed that China was shifting from a "large country to a large and powerful one."

The moves by Russia and China have not gone unnoticed by their European and Asian neighbors, who have responded with increased defense spending. As long as Putin and Xi remain in power, we expect both countries to continue their Propaganda of Power and to continue building out their military capabilities in an attempt to project global power and increase exports. The United States and its allies also will continue to increase military spending in response to the Propaganda of Power. ([Context Update](#))

□ Getting Past the Attack Mode: Science, Society and Business Edge Toward a New Way to Operate

In the great confrontation with society's problems, especially in medicine, a de-escalation of approaches has started. The use of a war metaphor to characterize approaches to be used to confront a critical issue (*e.g.*, poverty, cancer, terrorism) has outlived its usefulness. Medical scientists, marketers, roboticists and others are moving away from the mass aggressiveness model of the recent past and are advancing toward more subtle and more sophisticated approaches to those same critical issues. The key change in the perspective is away from dominance and power and toward coordination and collaboration. The clearest evidence is emerging from the field of medical research, but the mindset is spreading into more and more fields. This nascent societal change in approach and understanding will spread...even to politics. ([IF 3708](#))

□ Immunotherapy and Other Leaps in Cancer Care

In recent months, new treatments for cancer have shown remarkable progress, even in cases where all traditional treatments had failed and in some cases after the cancer had spread to distant organs. Surprising results, such as those experienced by former President Jimmy Carter when an immunotherapy drug put his late-stage metastatic melanoma into remission, are becoming more common. Such an elegant new treatment comes on the heels of new understanding into how cancer operates at the genetic and molecular levels. In addition, 64 percent of gene therapy studies since 1989 have focused on cancer and currently research is progressing through the 3,400 immunotherapy-oriented cancer-treatment trials under way in the U.S.

New drugs that function as an immunotherapy use a patient's own immune system, rather than debilitating radiation or chemotherapy, as the primary weapon against cancer. Some immunotherapy approaches involve disabling cancer's biological camouflage also using a drug, others involve engineering the immune system cells known as T-cells to find and then kill the cancer and still other approaches involve engineering a particular kind of immune cell, known as memory T-cells to target specific forms of cancer.

While immunotherapy is one new targeted and refined way to attack and kill cancer, scientists are also exploring new ways to update old approaches. Research now includes the use of bacteria to home in on cancerous cells, the use of virotherapy and the application of drugs that best treat specific genetic mutations. In addition, traditional chemotherapy is undergoing a reassessment and adjustment, such as the ratcheting down of the dosage used and allowing some cancer cells to survive so they may later keep chemo-resistant cancer cells in check. Taken together, these new methods suggest we are at a major inflection point in the fight against cancer. ([inF 1107](#))

□ Reactions and Regulations: Is Society Finally Turning Against the Gaming of Nearly Everything?

Manipulating the system, outwitting the "bigger fool," favoring "truthiness" over the truth, maneuvering around the rules and any other description of the time-honored American tradition of the confidence, or con, game – all of this reached new levels of intensity and practice early in the twenty-first century, prompting us to describe the phenomenon as the Gaming of Nearly Everything. In fact, gaming in everyday life became so widespread that it eventually provided entertainment, as television shows – often called reality programs – sought to make games of every detail of life, from finding a spouse to landing a job. And

poker – the height of “playing” or tricking the opponent with a “poker face” – became a cable-television staple. Moreover, taking advantage of the innocent reached a kind of apotheosis with the financial shenanigans of Wall Street, all wrapped neatly in a gamer-versus-gamer story told in a book and a movie, *The Big Short*. But recently, governments and observers have started to crack down on trickery in the marketplace, focusing on three arenas: Gaming, Secrecy and Market Balance (Fairness). Are these anomalies in the regulatory realm or are they signals of more things to come? (IF 3707)

□ Retail Revisionism: Analog to Digital is Just One Part of the Great Restructuring Taking Place in the Retail Industry

The retail environment faces revolutionary changes, which together threaten to upend many retailers who try in vain to sustain business models created in the twentieth century. We have noticed four kinds of actions that challenge retailers and brands: (1) Push On; (2) Go Direct and Get Personal; (3) Do Offline and Online (O and O); and (4) Spread Out. The reasons that these actions are gathering momentum have to do with several changes taking place outside the immediate arena of retailing: the New Economy and the Peak of Stuff have shifted market needs; consumers’ valuations have changed; the consumers’ buying process has been redone; and customers’ and retailers’ capabilities are advancing. From these areas of action and the causes that are moving them forward, we note that there will be: new and expanding competition in retailing, even as traditional retailers close stores; a different kind of market than existed when the current retailing business model came into play; and a new definition of retailing that will include characteristics once thought quite removed from the idea of selling things. (IF 3706)

□ Ubiquitous Bots: Smart Bots, Dumb Bots and the Battle for Consumer Time

Historian Arnold Toynbee quoted from a colleague that “history is just one damned thing after another.” In the realm of digital communications that seems to be fairly accurate. The next big “thing” seems to be chatbots, or software robots (bots) that bring many capabilities to individual apps, making it possible for users to get seemingly unrelated things done without leaving the app. That has made some apps seem more like portals, browsers or platforms.

The majority of early chatbot development is taking place on messaging platforms, but the idea seems to be spreading beyond the mobile device. Voice-controlled chatbot devices, such as Amazon’s Echo, are beginning to facilitate in-home transactions. In China,

WeChat has utilized bots for some time, enabling users to book airline tickets, hail taxis, buy movie tickets, play games, send money to friends, access fitness data, make a doctor’s appointment, search the local library, identify ambient music, find geo-targeted coupons, get banking information, pay utility bills, meet strangers in the vicinity, access magazine articles, get food from a vending machine, order drinks, *ad infinitum*...without ever leaving the app. Yet, outside China, individuals have indicated they would rather talk or type with a human over the Internet when troubleshooting problems and that they are less-than-patient with slow responses, even when speaking of thousandths of a second. We have not yet seen how patient large numbers of users will be with brands when a machine-learning bot doesn’t understand a question, provide a good answer or accurately facilitate a transaction. Early usage numbers suggest that individuals are exhibiting remarkable patience thus far. This new reality will make the smartphones and related bot devices, such as digital assistants, even more commanding of users’ time, pulling audiences away from other forms of entertainment and engagement. (inF 1106)

□ Where to Place Our Attention

The reporting and rehashing of mainstream news stories reflect the flow of events on a monthly, weekly, daily and even minute-by-minute basis, and we have found that the vast majority of individuals, such as investors, consistently read and talk about these same topics, whether they have appeared in publications, online or in mainstream research. In this way, a variety of “stories” become the “Topics *Du Jour*,” as attention and focus feed upon themselves with each new written piece and each new opinion. Our discipline of inference reading encourages us to seek out anomalies, facts and events **only**, while eliminating opinions, and thus to focus on larger contexts rather than the topics *du jour*. This provides intelligence and that is where true value lies.

Current topics *du jour* include: (1) Federal Reserve Monetary Policy; (2) Oil Supply/Demand Dynamics; (3) the Presidential Election; (4) Britain Leaving the EU (*i.e.*, Brexit); (5) Platform Advertising Revenues; and, (6) The Global Migrant Problem. Yet, the first critical decision in where to spend one’s time is to focus on contexts revealed by intelligence.

Greater value will be derived from focus on the following dynamics:

(1) Chinese fiscal policy has the potential to stimulate the Middle Kingdom in the short-term while allowing Beijing to execute on long-term goals. Successful execution will affect consumption, construction, commodities and myriad other sectors of the global economy.

(2) A Middle East geo-political resolution, or what we have called the Saudi Trifecta, with its shifting alliances and expanding combatants, will affect borders,

populations, infrastructure, military targets and will change geopolitical objectives as well as oil prices.

(3) Corporate expense management has become the knee-jerk reaction by companies as sales and profits have become elusive. Tactics such as layoffs, reduced purchasing, less construction, share buy-backs, etc., have been ramping up and could trigger the next recession.

(4) Global Growth, in the form of trade, interest rates, bank solvency, etc., remains a critical focus for trade and economies.

(5) Offerings that meet customer demands (see, Why Alphabet? below), require first, to ascertain what is valuable to the customer and then, second, grow a business to satisfy those needs, rather than offer products and services just because "we can."

(6) Nationalism is rising today because global trade and geopolitical conditions are so complex that no leader, organization or citizen seems capable of grasping and handling them. Citizens are beginning to think that their countries need to retreat back into their own borders, cut off outside influences and take care of themselves as expressed in anti-immigrant and anti-internationalist rhetoric.

The constant deluge of data, opinions and information today often masquerades as intelligence. In this environment, the critical decision individuals must make is where to place their attention. By focusing on the intelligence and screening out the "noise,"

individuals (and investors) will be prepared to anticipate and position for the implications of that intelligence. **(Personal Briefing)**

□ Why "Alphabet"? Strategies for Next Generation Companies

Next-generation technology giants Google, Amazon, Alibaba and Facebook appear to have constantly evolving business strategies which have changed the way in which these companies experience growth and have allowed them to meet, and many times exceed competitors in many industries. These online giants appear to recognize that the areas that made them successful – search, advertising, online distribution and social media – will not continue to grow at the same pace as they have historically. The big companies each seem to be asking themselves, "What is of value to the customer today?" And, "How can we play in this?" They are recognizing the need to continually invest in the "next" era, including, in this instance, artificial intelligence (AI), robotics, entertainment and sports, in order to be well positioned for the changing environment. This new strategy is very different than past strategies when companies decided to focus on a narrow objective and execute forcefully. This new way of operating may be a template by which to view other companies for years to come. Companies involved in competitive businesses will likely find it hard to create or maintain a competitive position. **(Personal Briefing)**

