With every passing year, technological advances are reaching more godlike dimensions—enabling humans to move about, communicate, and heal ourselves in previously unimaginable ways. As new technologies and applications arise, how will we cope with the effects of their power? What price will we pay for cheating death, creating life, and genetically altering living beings—including ourselves? As we spend more time alone and in virtual worlds, will what divides us grow more powerful than what unifies us? With this study, we seek to understand people's perceptions and expectations of various aspects of technology in order to gain a clearer glimpse of what is to come.

About the Study

In March/April 2017, Havas partnered with Market Probe International to survey 12,168 men and women ages 18+ in 32 markets:

Argentina, Australia, Belgium, Brazil, Cambodia, Canada, China, the Czech Republic, Denmark, Ecuador, France, Germany, India, Indonesia, Ireland, Italy, Japan, Malaysia, Mexico, Myanmar, the Netherlands, the Philippines, Poland, Portugal, Russia, Saudi Arabia, Singapore, South Africa, Spain, the United Arab Emirates, the United Kingdom, and the United States.

The survey sample was made up of **21%** leading-edge **PROSUMERS**
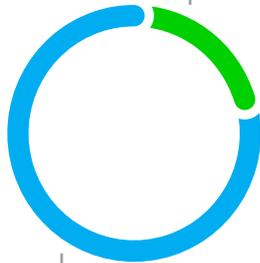
and **79% MAINSTREAM** consumers.

Who Are Prosumers?

Prosumers are today's leading influencers and market drivers. They've been a focus of Havas studies for more than a decade. Beyond their own economic impact, Prosumers are important because they influence the brand choices and consumption behaviors of others. What Prosumers are doing today, mainstream consumers will likely be doing 6 to 18 months from now. **Learn more at mag.havas.com/ prosumer-reports/**.

MILLENNIALS ages 18–34

GEN XERS ages 35–54

BOOMERS ages 55+

Prosumer and mainstream respondents are segmented into the above generations.

Due to rounding, some figures do not add up to 100%.

5 Truths About iLife

For 1 in 5 millennials, virtual trumps reality.

Most of us live in two worlds now—our "real" lives on planet Earth and the virtual lives we have created online—and increasingly those worlds are colliding: More than a quarter of millennials report feeling depressed or unhappy about their own lives in comparison with the idealized lives they see online. And around 1 in 5 prefer who they are on social media to their actual selves. At what point will the allure of the worlds and personas we have carefully crafted online become more valuable—and even more real—to us than our flesh-and-blood existences?

The wall between our consumer and private lives is eroding.

Our front doors have long been a physical and symbolic divide shielding our most intimate lives from view. This will change as consumers give brands virtual house keys, inviting them to stock their refrigerators and drop off other products when the homeowners are out. Drones and other new technologies will allow our properties and perhaps even our home interiors to be scanned in order to trigger brand offers (upgraded patio furniture, anyone?). Security and privacy have become a currency more people are willing to exchange for convenience and fun.

5 Truths About iLife

Humans 2.0 will be lazier and dumber.

Human beings have long had a complicated relationship with artificial intelligence (AI). We dream of the convenience of robotic housekeepers even as we immerse ourselves in dystopian tales of robots run amok. Our study reveals that it is not robots we fear so much as our own baser selves. Will AI ultimately make humans lazier, less independent, and less capable of creative thought?

Divided, we fall.

Our online communities have become echo chambers in which we shield ourselves from news and ideas not in synch with our existing worldviews. This will only get worse as more people make social media their primary source of news, as a majority of Prosumers and millennials already do. Nearly half our global respondents agree that social media is a fracturing force.

Our impending loss of privacy terrifies us.

Most of us love technology, and yet lurking beneath our excitement is a morass of fear and uncertainty related to data breaches and unlawful surveillance. How can brands deliver digital products and services that inspire not just enthusiasm but also confidence?

Stating the Obvious: We Are Moving Toward Total Connectivity

Just about all of our study respondents—95% of Prosumers and 87% of mainstream consumers—own a smartphone. But ownership is far from evenly distributed, with rates ranging from a low of 36% in Cambodia to 70% in Japan and 98% or more in China, India, Saudi Arabia, Singapore, and Spain.

For a growing number of us, smartphones have become our go-to digital tool. People now are more likely to search Google on their mobiles than on their desktops, and, according to **Pew**, a majority of US adults already are making purchases via their smartphones. With every new download, our phones can add a new utility—serving as a fitness coach, interior designer, museum docent, or myriad other things. It's little wonder, then, that 4 in 10 Prosumers and millennials already spend more time in apps than on websites and that more than a quarter of millennials would rather lose their wallet than their phone.

What's next? Perhaps total body integration. Already we are seeing mobile technology **embedded into our clothing** and even **implanted under our skin**. For now, just 16% of Prosumers and 12% of the mainstream would like to see smartphone technology integrated into their anatomies, but those numbers increase to 23% of the total sample in the United States, to 32% in China, and to 35% in India. In the not-so-distant future, we may not have to worry about losing our wallet or phone, because the functionalities of both will be within us.

Do you have a smartphone? (Yes)

PROSUMERS	95%
MAINSTREAM	87%
MILLENNIALS	93%
GEN XERS	90%
BOOMERS	74%
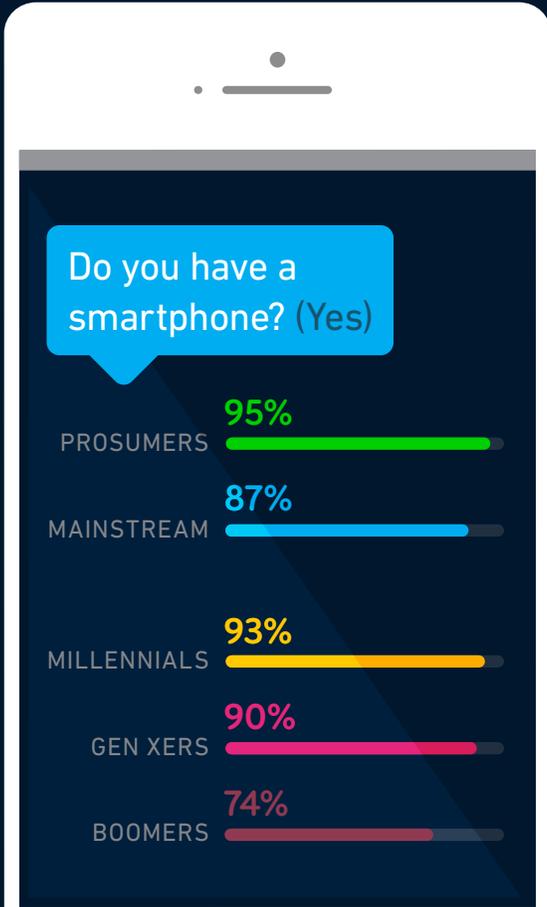
I spend more time in apps than I do on websites

- 41%
- 28%
- 42%
- 27%
- 14%
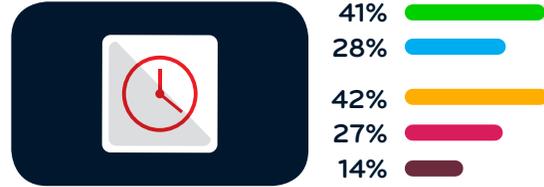
I would rather lose my wallet than my phone

- 29%
- 19%
- 27%
- 20%
- 11%
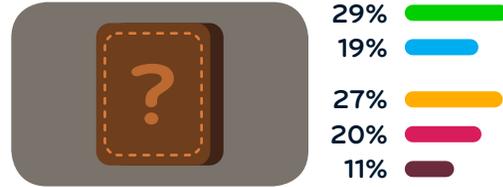
I would like my smartphone to be integrated into my anatomy (e.g., implanted in my brain or skin)

- 16%
- 12%
- 17%
- 12%
- 6%

FEMALES 10%
MALES 16%

% AGREEING STRONGLY/SOMEWHAT

Reaching the Limits of Total Connectivity

Less *Is* More

As much as we love our apps, we actually want fewer of them—or at least a more carefully curated collection. Apps take up precious space, and so half our sample claim they have what they need and don't wish to download more. Only the most appealing and useful new entries will prevail. WeChat is ahead of the game in its efforts to become a super-app in which other apps reside. This allows people to use one platform (and consequently one brand) to perform any activity without the need to download anything new.

I have all the apps I need on my smartphone and do not need to download more

50%
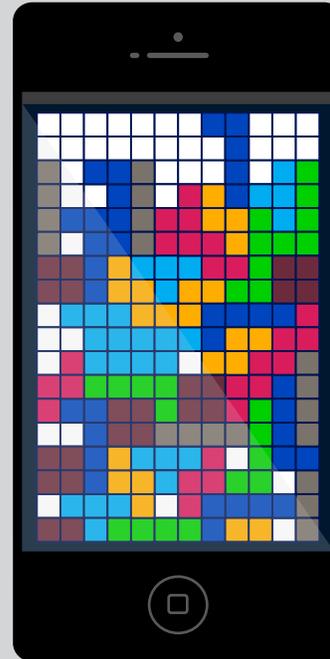
TOTAL | % AGREEING STRONGLY/SOMEWHAT

# The Rising Worry that Technology Is Weakening Human Bonds

Technology is addictive. More than 6 in 10 survey respondents—and nearly three-quarters of Prosumers—say they always keep their phone within reach unless it is charging. Nearly half of Prosumers and millennials check their phones if they wake up in the middle of the night, and more than a quarter admit to being a "slave" to their smartphones. We just can't quit them.

On a larger scale, people are increasingly worried about the societal effects of mobile technology. In our **2009 study**, 51% agreed with the statement, "I worry that digital communication is weakening human bonds." Eight years later, more than two-thirds agreed with a similar statement: "Modern technology is weakening human bonds." Looking at some of the markets included in both studies, we see a clear increase in concern. In the US, 54% agreed with the original statement in 2009 compared with 68% who agreed in 2017. We saw similar increases in other countries, as well, including Brazil (55% agreed in 2009 vs. 76% in 2017), the UK (48% vs. 63%), and China (55% vs. 64%). The concern is clear: As we become more and more plugged in to our digital devices, we may be sacrificing the ties that unite us as a species.

Other than when it's charging, I always
keep my smartphone within reach

73%

65%

58%

61%

52%
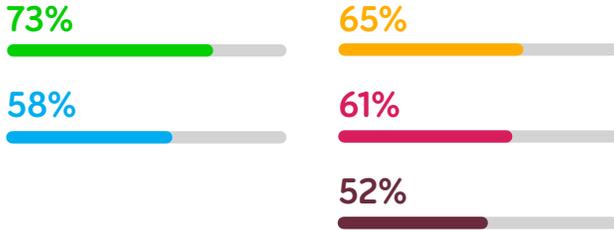
When I wake in the middle of the night,
I usually check my phone

49%

48%

32%

32%

15%

OBEY
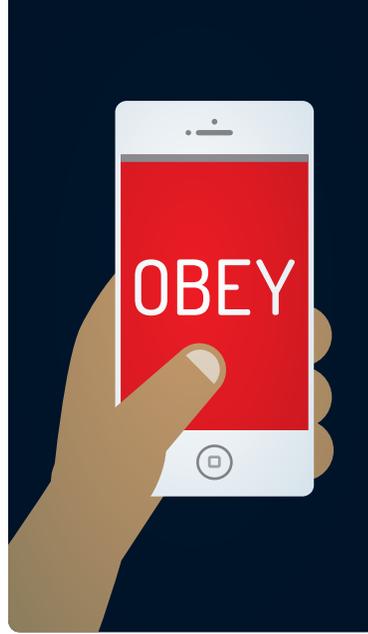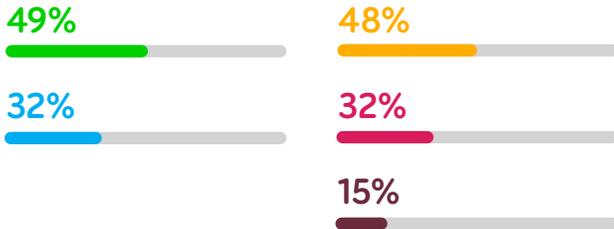
I am a "slave"
to my smartphone

27%

18%

27%

18%

9%

Modern technology
is weakening
human bonds

67%

● PROSUMERS ● MAINSTREAM ● MILLENNIALS ● GEN XERS ● BOOMERS ● TOTAL   % AGREEING STRONGLY/SOMEWHAT
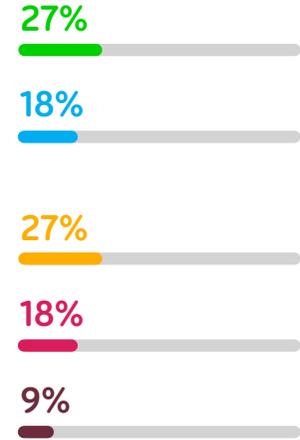
What's Next? Striking the Right Balance

Many of us are torn between our desire for convenience and our fear that its cost—in social disruption and in compromised privacy and security—ultimately will be too high to bear. One component of this is how much of our lives we are willing to place in the hands of a particular company. The bestseller **The Circle** envisions a world in which one superbrand dominates not only all other brands but all industries because of its efficiency and the convenience it offers. Are you willing to lay open your life to Amazon or another brand in exchange for a reliable source of products, grocery deliveries, home services, entertainment, and more? Many of us are. Even those who claim to hate Uber may find their resistance destroyed by the allure of hot food delivered from their favorite restaurant.

The imperative for brands will be to integrate themselves seamlessly into people's lives while also respecting customers' limitations—including the limitations some people may not be willing to admit. Consider the emerging field of in-car apps. We saw in our **"Modern Nomad"** study that most Prosumers would like their cars to be connected to the internet, but we also have strong evidence that this will increase the potential for distraction-related injuries and fatalities. Nearly 6 in 10 of our survey respondents are sufficiently concerned about this prospect to agree that automakers should block apps when people are driving alone. In other words, we have

already reached the point at which most of us recognize that we need to be protected from some digital capabilities. Just because a brand can deliver a next-level order of convenience does not mean it should.

Automakers should block apps when people are driving alone

58%
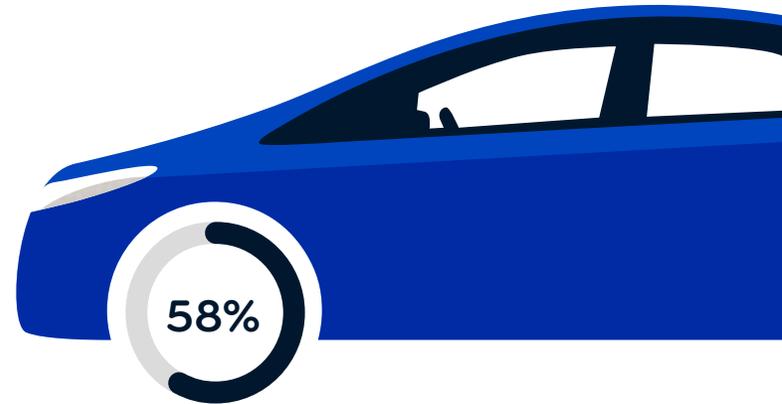
TOTAL | % AGREEING STRONGLY/SOMEWHAT

Trolls, Fakers, and FOMO, Oh My!

Social media empowers me to support causes I care about

85% INDIA

31% JAPAN
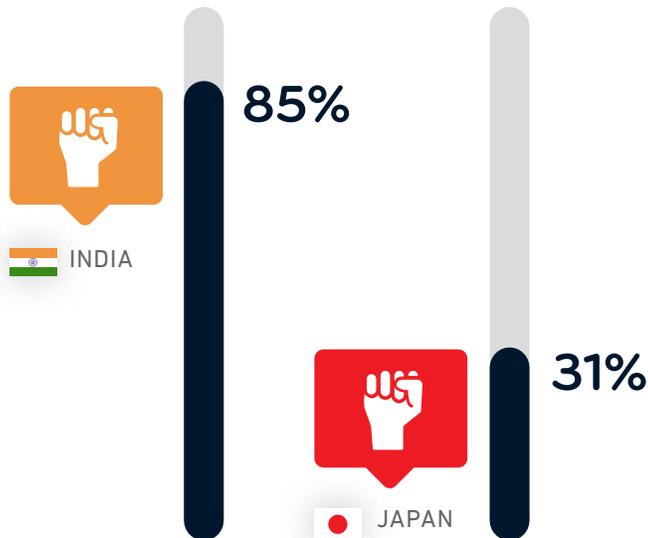
It's All in How You Use It

Social media companies have amassed some 2.8 billion active users as of the start of 2017—among them, 97% of the Prosumers and 83% of the mainstream consumers in our study. When these sites first sprang up, they were places we would check in on once in a while. Now, for many of us, they have become our principal way to connect with—and perhaps even influence—the world. Ever since the so-called Arab Spring of 2011—when social media first was recognized as an essential tool for activists—we have seen it steadily grow as a "place" where people can connect and take unified action in support of personal, political, social, and environmental causes. Today, more than 7 in 10 Prosumers use social media in support of causes they care about, as do half of mainstream consumers. This phenomenon is particularly pronounced in certain markets. In India, for instance, 85% of Prosumers say social media empowers them to support causes they care about, compared with just 31% of Japanese Prosumers who say the same.
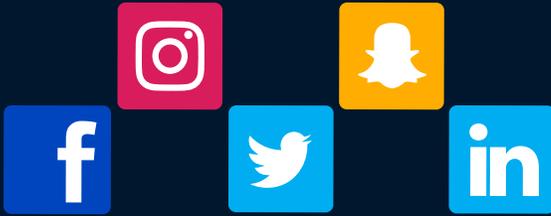
Do you ever use social media sites? (Yes)
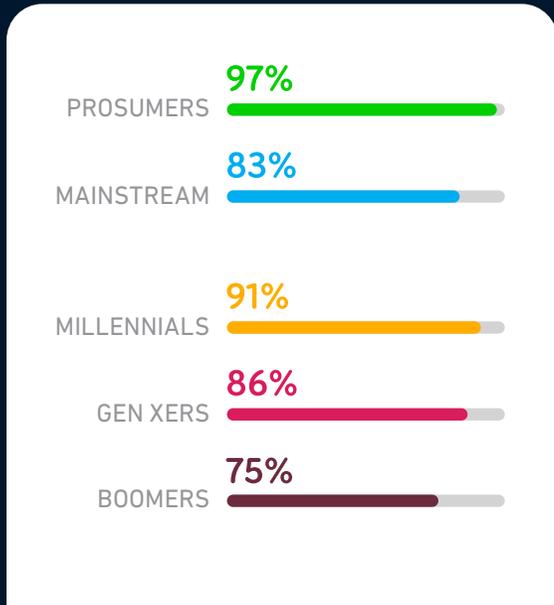
PROSUMERS **97%**

MAINSTREAM **83%**

MILLENNIALS **91%**

GEN XERS **86%**

BOOMERS **75%**

Social media empowers me to support causes I care about

PROSUMERS **71%**

MAINSTREAM **50%**

MILLENNIALS **58%**

GEN XERS **55%**

BOOMERS **46%**
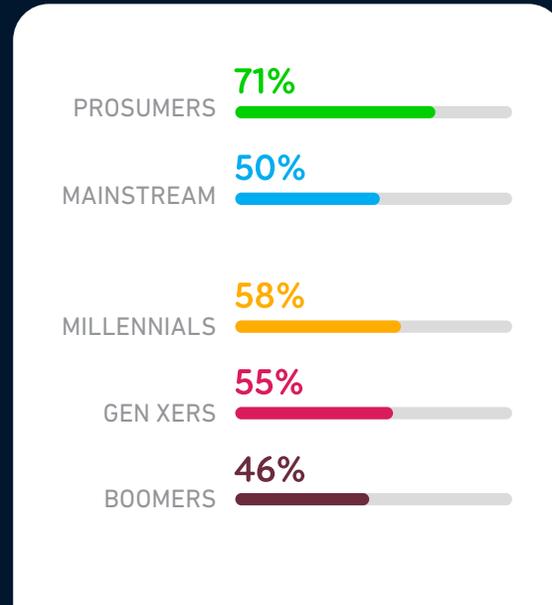
At present, the average user spends around **two hours a day** on social sites, with Facebook typically taking up 35 minutes of that time. Nearly half the mainstream consumers we surveyed consider social media a big time waster, but that percentage falls to 35 among Prosumers, suggesting that they use these sites in more worthwhile ways. Looking at the individual markets, Germans (82%) and Russians (78%) are the most apt to consider social media a waste of time, while people in the Philippines (20%) and Japan (23%) are the least likely to feel that way.

Social media is a big time waster

**35%**   **48%**

The Ties that Divide Us: Two Downsides

Downside #1: Half Our Global Sample Believes Social Media Is a Divisive Force

For a majority of Prosumers and millennials, social media is now their main source of news. That's important for a couple of reasons. First, it likely means people are getting their news via headlines and fast-breaking, rather than in-depth, reports. Second, it means people are more likely to get their news from within a media bubble of their own making, thanks to relevance algorithms that keep feeding us more of what we have already chosen to consume. More than a third of Prosumers and millennials are cognizant of that bias, admitting that social media tends to confirm their already established opinions rather than challenge them. The significant difference in agreement levels between Prosumers (42%) and the mainstream (28%) on this question indicates that this is a view that will gain traction.

● PROSUMERS ● MAINSTREAM   % AGREEING STRONGLY/SOMEWHAT

Social media is my main source of news

52%	████████
37%	██████
53%	█████████
36%	██████
20%	████
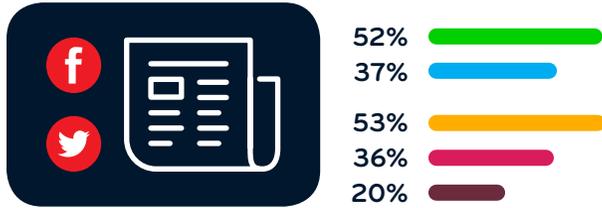
Social media confirms my own opinions rather than challenging them

42%	████████
28%	█████
36%	███████
30%	██████
24%	█████

As the modern world grapples with the influence of social media, a consensus is forming that these platforms are serving to dissolve some of the societal "glue" that binds us. Nearly half our global sample (45%) believe social media is a divisive force. Anyone who has spent much time on these sites in the last year can certainly attest that the lines are clearly drawn, separating those who support Trump, Brexit, gun ownership, Catalonian independence, immigration, the fight against climate change, or whatever the issue might be from those who oppose these things. Increasingly, the two sides on each issue cannot even agree on what is a bona fide fact, as people grapple to separate legitimate from "fake" news and human users from propaganda-spewing bots.

In the past, social media brought people together; today, it divides them

48% MILLENNIALS

44% GEN XERS

43% BOOMERS

● PROSUMERS ● MAINSTREAM ● MILLENNIALS ● GEN XERS ● BOOMERS   % AGREEING STRONGLY/SOMEWHAT
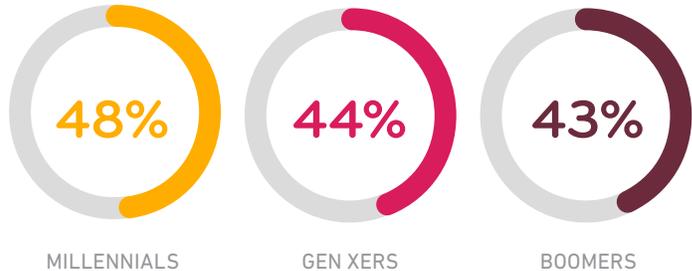
In the early days of the internet, people spoke hopefully about the democratization of knowledge and the potential for more meaningful connections to be forged across the globe. Now it appears that, instead of opening our eyes and minds, these platforms are making people even more provincial and narrow-minded.

What's Next?
Situation Critical

One issue we are likely to hear a good deal more about in coming years is the impact these media bubbles are having on our ability to objectively analyze information. Nearly half our global sample think social media is reducing people's ability to think critically. How will we defend against that? Social platforms are **struggling** in their efforts to combat fake news, which may mean it is up to schools to implement programs that help children distinguish what is real from what is not. It's possible we will see a migration toward Reddit, Quora, and other platforms where people can find opposing views, but it seems increasingly likely that the heyday of unbiased news reporting—and consumption—is behind us. And that is a dangerous problem indeed.

% AGREEING STRONGLY/SOMEWHAT

Social media is reducing our ability to think critically

41%

PROSUMERS

48%
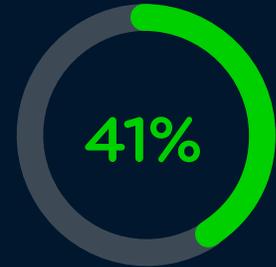
MAINSTREAM

Downside #2:
In the Words of Teddy Roosevelt, "Comparison Is the Thief of Joy"

We are all familiar with the psychological effects of our new social platforms, including depression and loneliness, and so we will only touch briefly on them here. Suffice it to say that most users choose to depict the rosy highlights of their lives on these sites—happy children, inviting vacation spots, highly photogenic meals—while minimizing or leaving out altogether life's imperfections. This can make our own lives seem worse by comparison—a situation particularly prevalent among younger people. Around 1 in 5 global respondents say that seeing other people's lives on social media makes them unhappy with their own lives. This number increases to 28% of millennials overall and to 41% of millennials in the UK and 39% in the US. At the same time, 20% of millennials—and 41% of US millennials—actually prefer their social media lives to their real lives. Even more disturbing, around 1 in 5 Prosumers and millennials actually prefer the *people* they are on social media—meaning their personalities and ways of interacting—to their real selves. It's a whole lot easier to be a thoughtful sage or life of the party when one's conversations come with an "edit" button.

Seeing other people's lives on social media makes me depressed/unhappy about my own life

28%
18%
11%
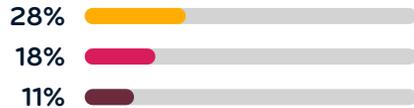
I prefer my life on social media to my actual life

19%
13%
8%
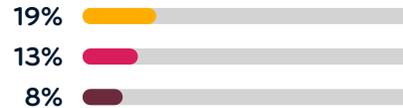
I prefer the person I am on social media to the "real" me

21%
17%
11%

● MILLENNIALS ● GEN XERS ● BOOMERS   % AGREEING STRONGLY/SOMEWHAT

Beautiful Beach!

So gross!
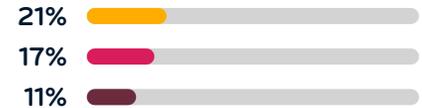
What's Next: Gen Z Masters the Social Media Game

Millennials are known as digital natives, but it is actually the next generation—Gen Z—that is doing the best job of customizing social media use for their particular needs. They safeguard their privacy by using ephemeral platforms such as Snapchat that cause their stories to automatically disappear, and they are more apt to delete older photos and other content so as to keep their social personas up to date. They also are perfecting the art of creating multiple personas online. So, on Instagram, for instance, they may maintain two accounts: their "real" one (rinstagram), which displays what they want the world to see, and their "fake" one (finstagram), in which they post things for the eyes of a close set of friends only. (In truth, finstagrams tend to be more real than rinstagrams, but who are we to quibble?) In this way, they can decide who gets to see—and judge—which aspects of their personal narratives. We are also seeing Gen Z lead the way in terms of monetizing social media and turning large fan bases into paying careers, as Lauren Giraldo, Britney Vargas, Bretman Rock, and others have done.

Data Creep and the End of Privacy

Data Used for My Convenience: Approved...

How comfortable would you be with a Walmart employee entering your home while you're at work and **stocking your refrigerator** with groceries? Or an **Amazon delivery person** tucking your packages just inside your front door? Both services are already under way, albeit on a limited scale. Or how about if a company had enough data on you that it could anticipate products you likely would want and then **ship them to your home** before you even ordered them? Creepy? Cool? A little of both?

As would be expected, Prosumers and millennials are ahead of the curve when it comes to embracing such schemes. Nearly half of both groups would like their refrigerators to automatically order needed items, while one-third are looking forward to "anticipatory shipping"—receiving products companies think they will want even if they have not yet ordered them. China is well ahead of the pack in this regard, with 80% of Prosumers looking forward to automatic refrigerator refills, and 70% keen on the notion of packages arriving unprompted.

I would like my refrigerator to automatically order products I run out of and have them delivered to my home

46%
31%
44%
32%
17%
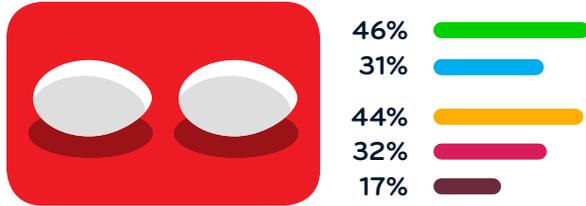
I would like companies to be able to predict what I will need to buy and send it directly to my home

33%
23%
33%
24%
13%

...But Stay Away from My Private Life

It is one thing to have voice-controlled devices in our homes keeping us up to date on news and ordering us a pizza, and quite another to have them recording our every word and delivering them back to the mother ship—which is what happened to at least one early user of the **Google Home Mini**. Google reportedly has fixed the problem, but privacy fears remain. A majority of people—both Prosumers and the mainstream—worry about how companies are intending to use the personal data they stockpile. The situation will grow even more fraught as the Internet of Things spreads. Already, around three-quarters of those surveyed worry about privacy and security concerns stemming from internet-connected devices in their homes. Prosumers are early adopters of technology, but they are even more concerned than the mainstream about the potential for these devices to be hacked or used for unlawful surveillance.

● PROSUMERS ● MAINSTREAM ● MILLENNIALS ● GEN XERS ● BOOMERS   % AGREEING STRONGLY/SOMEWHAT

It worries me that I do not know what companies are doing with my data/ information

80%

73%
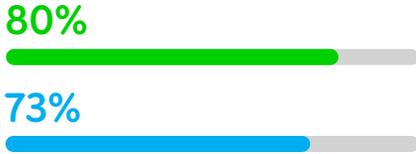
I worry that internet-connected devices will be hacked and cause harm to individuals/communities

78%

73%
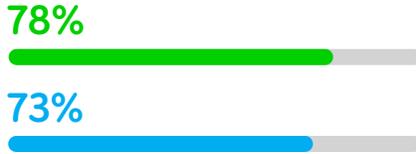
I worry that internet-connected devices will be used for unlawful surveillance

78%

72%
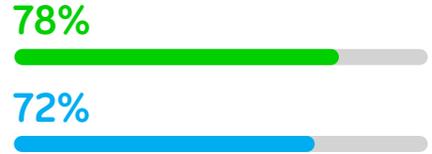
That said, there is an upside to digital surveillance for some people. Nearly 7 in 10 parents surveyed (and 8 in 10 Prosumer parents) would like to be able to geo-locate their children at any time through their phones. What's good for the kid isn't necessarily good for the parent, however: Less than a third of those surveyed would like their friends and families to be able to geo-locate them through their smartphones. There was a wide gap in agreement rates by country, with just 7% of Dutch and 9% of Germans willing to be trackable via their smartphones versus 70% of Cambodians, 62% of Indians, 57% of Chinese, and 53% of Russians.

PARENTS ONLY: I would like to be able to geo-locate my kids at any time through their phones

80%
66%

71%
69%
63%

SMARTPHONE USERS ONLY: I would like friends and family to always be able to find out where I am at any moment (geo-location) through my phone

38%
26%

31%
29%
24%

What's Next: Is Privacy an Outdated Luxury?

We talk about privacy, we fret about privacy, but, for the most part, people are resigned to the notion that there is no longer any easy, affordable, or reliable way to keep their private data secure. Consumers are finding themselves at the center of a business model with which they don't feel completely at ease. And most agree that we are headed toward a future in which there simply will be no way to keep our private data secure. Have we given up? Will we reach a point at which the privacy costs push us away from the technologies we have grown to depend on? Or are we holding out hope that some tech brand will swoop in and solve the problem? We will probably see a bit of all three.

In the future, none of us will be able to keep our private data secure

68%	67%	66%	67%	70%

In the future, maintaining our privacy/private data will be expensive

71%	64%	66%	64%	65%
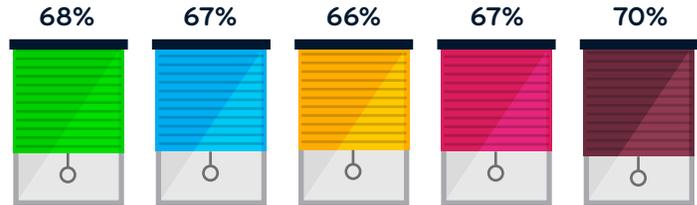
I do not care what companies are doing with my data as long as I get free services/products in return

18%	16%	20%	15%	10%

● PROSUMERS ● MAINSTREAM ● MILLENNIALS ● GEN XERS ● BOOMERS   % AGREEING STRONGLY/SOMEWHAT
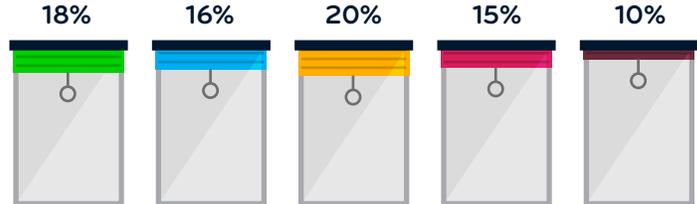
Artificial Intelligence: Our New Life Partner?

AI Is Good...Except When It's Not

In his bestseller **Sapiens**, Yuval Noah Harari took us through a short history of the evolution of humankind and how we have not only adapted but also mastered our physical environment. In its sequel, **Homo Deus**, Harari explores humanity's next chapter: a tech-driven future. He speaks of a time when humans exchange meaning for power. A time when we cede our authority to machines and, in so doing, endanger many of the things we hold most dear. That time may finally be approaching, as artificial intelligence (AI) migrates out of science fiction and pop culture and into our actual lives.

For now, most people still consider AI a thing of the future—something that will affect our children and grandchildren more than ourselves. But overall, we are optimistic about the changes it will bring. Nearly two-thirds of Prosumers and half the mainstream believe that artificial intelligence will be good for society. In general, emerging markets are the biggest fans of the technology. Despite the United States being a primary driver of AI development, barely half of US Prosumers (55%) and just 44% of the mainstream believe AI will end up benefitting society overall, compared with 95% of Prosumers and 86% of mainstream consumers in China.

Emerging Themes and Tensions

To better understand people's hopes and fears regarding intelligent machines, we provided a list of possible scenarios and asked people which they believe will come true. This allowed us to identify multiple themes and tensions that will help us understand how to balance people's desires and anxieties over AI.

>> PROSUMERS & MEN: AI WILL HELP HUMANITY PROGRESS <<

Our study uncovered a clear gender divide. Just 44% of females in our global sample are optimistic about the future of AI compared with 60% of males. This is in line with our **2015 study**, which found that 25% of men versus only 16% of women would choose to be a cyborg if given the option.

% AGREEING STRONGLY/SOMEWHAT

Artificial intelligence will be good for society

44%
FEMALES

60%
MALES

63%
PROSUMERS

49%
MAINSTREAM

56%
MILLENNIALS

52%
GEN XERS

44%
BOOMERS
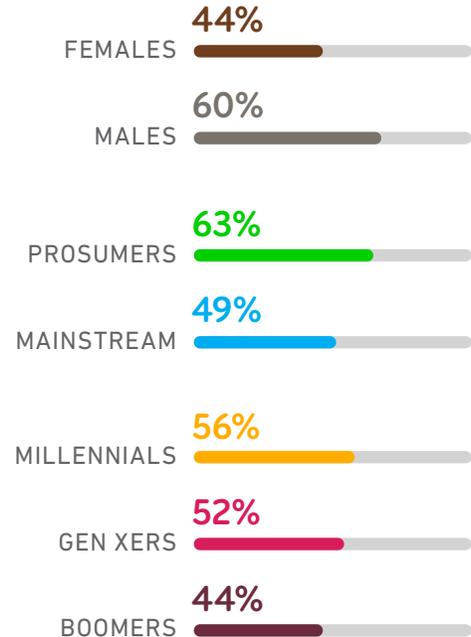
Looking at our list of potential scenarios, the responses confirmed that Prosumers and men are the two groups most welcoming of AI. While women are most apt to think these new technologies will take away jobs, leaving millions of people unemployed, Prosumers and men said the two most likely scenarios are that intelligent machines will help humanity progress and solve society's most pressing problems.

In the future, artificial intelligence will... (Choose all that apply.)

FEMALE   MALE

Take away jobs and leave millions of people unemployed
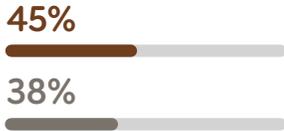
45%

38%

Liberate us from repetitive tasks and give us more time to enjoy life

36%

45%

Help humanity progress

32%

45%

Create new jobs that we cannot even imagine today

28%

35%

Solve our most pressing problems

21%

30%

Take over and control human society

26%

21%

Destroy our planet

16%

14%

None of these

8%

6%
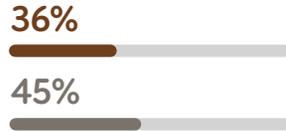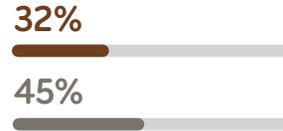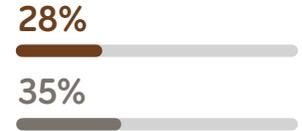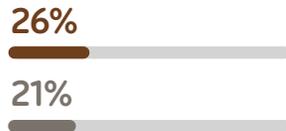
% AGREEING STRONGLY/SOMEWHAT

>> LIBERATION MAY LEAD TO LAZINESS <<

Sizeable proportions of the sample believe that AI will liberate us from repetitive tasks and give us more time to enjoy life. While most of us would love to have a 2.3-day workweek, that added leisure time might come at a price: 57% worry that humans are going to become lazy and idle once intelligent machines are fully embedded in our lives. Nearly as many (55%) worry that we are going to lose our ability to solve problems on our own. And 44% think we are going to become less imaginative. These numbers don't differ all that much in tech-obsessed China, indicating that even the biggest supporters of AI are concerned about the potential for unintended—and unwelcome—consequences.

When AI and robots are fully embedded in our lives, I worry that humans are going to...
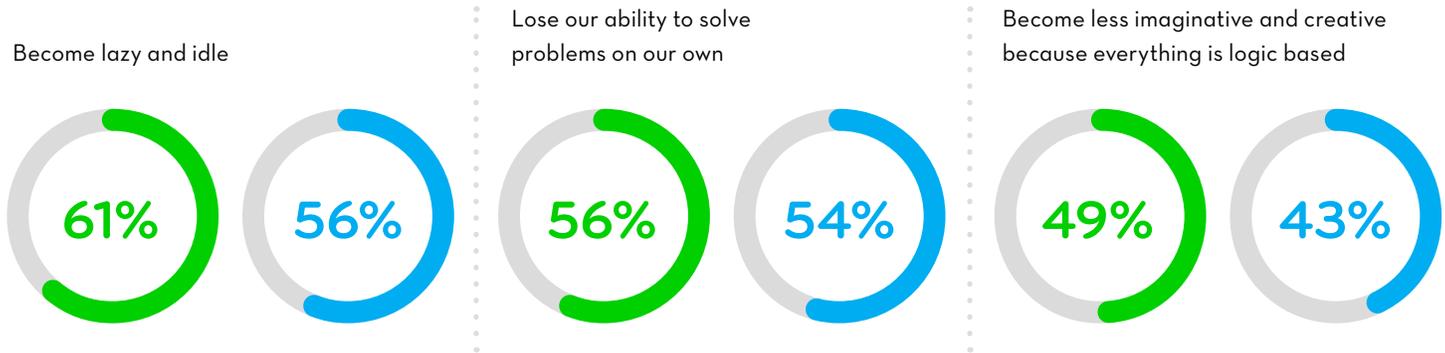
Become lazy and idle

61% **56%**

Lose our ability to solve problems on our own

56% **54%**

Become less imaginative and creative because everything is logic based

49% **43%**

● PROSUMERS ● MAINSTREAM   % AGREEING STRONGLY/SOMEWHAT

One of the scenarios we posited is familiar to sci-fi fans: Will machines eventually take over and control human society? Nearly a quarter of our sample fear this dystopian future will actually take place. Again, we see a pronounced male/female split, especially in some markets. In France, for instance, 20% percent of males and 35% of females think robots will take over; in the US, those numbers are 19% and 27%, respectively.

It turns out, though, that people actually trust AI more than they do their own species: While only 22% of Prosumers fear AI will take over and control humanity, an astounding 44% worry that humans are going to use robots to wage war and ultimately destroy the planet. And 33% of Prosumers fear humans will use robots to enslave much of humanity.

When AI and robots are fully embedded in our lives, I worry that humans are going to...

Use robots to wage war and ultimately destroy the planet

44% **42%**
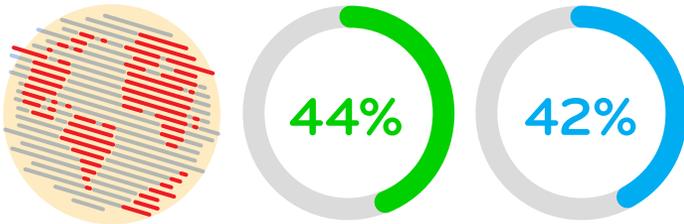
Use robots to take control and enslave much of humanity

33% **33%**

● PROSUMERS ● MAINSTREAM   % AGREEING STRONGLY/SOMEWHAT

>> A JOB LOST IS A JOB GAINED. WAIT, IS IT? DEPENDS ON THE CULTURE. <<

When looking at individual countries, a cultural bias is revealed between markets where AI development is already common and those that have been slower to embrace these new technologies. At present, China is among the countries with the highest concentrations of industrial robots, and in this case familiarity has bred comfort: A majority of Chinese surveyed (52%) think AI will create jobs we cannot even imagine today, while just 27% worry it will leave millions unemployed. In the US—which **PwC estimates** will lose nearly 40% of jobs to automation by 2030—opinions are far more divided: 40% of the sample believe AI will take away jobs, while 32% believe it will create them. There is a correlation with technology affinity here: 53% of Americans surveyed who do not currently own a smartphone fear AI will destroy jobs, compared with 38% of smartphone owners. At the other end of the spectrum is highly traditional France, where just 28% of respondents believe AI will create jobs, compared with the 40% surveyed who believe it will destroy the livelihoods of millions.

Jobs are often a big part of the debate when the topic of AI emerges. As with the industrial revolution of the 18th and 19th centuries, there is the question of whether more jobs will be created or lost as a result of automation. Prosumers are pretty evenly split on this topic, with 39% believing AI will take away jobs and leave millions unemployed, and 37% saying AI will create new jobs that we cannot even imagine today. (Granted, the two scenarios are not mutually exclusive.)

NEW WORLD VS. OLD: A CULTURAL DIVIDE

CHINA   FRANCE

In the future, artificial intelligence will...

THE GOOD:

Liberate us from repetitive tasks/give us more time to enjoy life
- China: 66%
- France: 35%
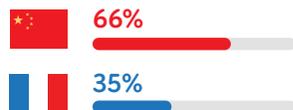
Help humanity progress
- China: 65%
- France: 27%
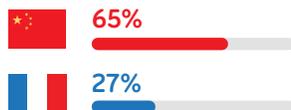
Create new jobs we can't even imagine today
- China: 53%
- France: 28%
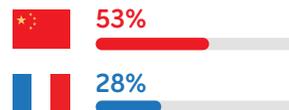
Solve our most pressing problems
- China: 41%
- France: 18%
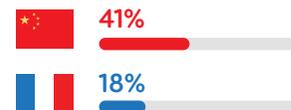
THE BAD:

Take away jobs and leave millions unemployed
- France: 40%
- China: 27%

Take over and control human society
- France: 28%
- China: 14%
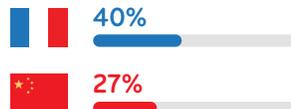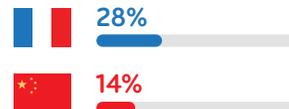
Destroy our planet
- France: 17%
- China: 7%
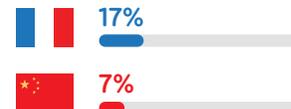
>> HUMANS (STILL) WANTED <<

There are a lot of jobs robots can manage at least as well as humans—and certainly more cheaply and dependably. But we have not yet reached the point at which most of us are willing to let an intelligent machine take up just any position. We gave our respondents a list of 10 professions and asked which functions they would be comfortable handing over to intelligent machines. Globally, a slight majority (58% of men and 45% of women) are already willing to see at least one key profession placed in the bionic hands of our robot friends.

A NUMBER- OR FACT-BASED JOB?

Ms. Robot, you are hired!

Nearly a quarter of global respondents are comfortable with the idea of machines serving as their financial advisors, and 1 in 5 are OK with the notion of robotic educators. That makes sense, given that these jobs require a good deal of number crunching and information sorting. Nearly 1 in 5 Prosumers and males would be willing to consult a robotic physician, and 21% of both groups would happily let machines work as scientists.

AN EMOTION- OR JUSTICE-BASED JOB?

Sorry, Mr. Robot, we'll pass.

Currently, people are least willing to turn over to robots jobs that require especially high levels of emotional intelligence and/or that involve making decisions with important societal consequences. Just more than 1 in 10 are willing to see robots take over the jobs of police officers, journalists, or lawyers. Even fewer want to see judges, political representatives, or religious leaders replaced by robots.

I am comfortable with the idea of artificial intelligence machines acting as… (Choose all that apply.)

Religious leaders

6%

Judges

9%
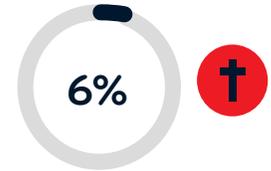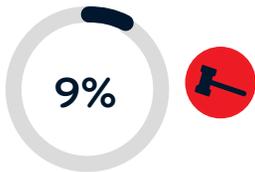
My political representatives
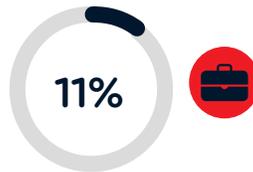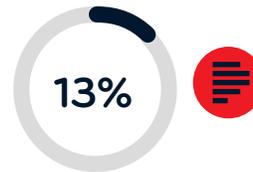
9%

My lawyer

11%

Journalists

13%

Police officers

13%

My doctor

15%

Scientists

18%

Teachers

20%

My financial advisor

23%

None of these

49%
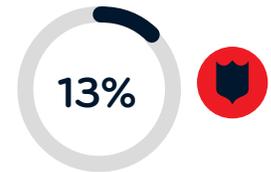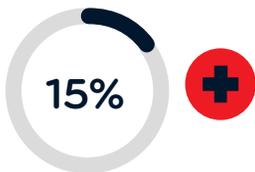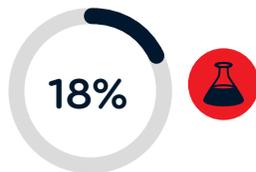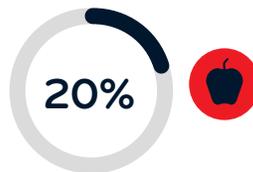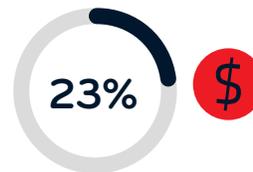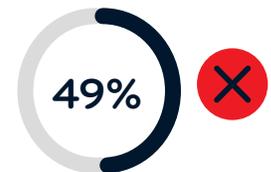
Cultural Distinctions

Looking at the individual countries surveyed, China and India stand out for their ahead-of-the-curve embrace of automated professionals. Eight in 10 Indians and nearly 9 in 10 Chinese are comfortable with the idea of intelligent machines taking on at least one of the 10 listed professions. Among Chinese respondents, a majority (51%) already are comfortable with the notion of having an automated financial advisor, 42% would be willing to put themselves under the care of a robotic doctor, 36% are OK with the idea of machine-based teachers, and 32% have no problem with automated police officers. In India, a third or more of the sample are comfortable with the notion of AI-based teachers (42%), financial advisors (41%), and scientists (35%). These figures contrast sharply with some of the more developed markets. In the US, UK, France, Germany, Australia, and Canada, among other countries, none of the 10 potentially automated professions garnered the approval of even a fifth of the sample.

It is also worth noting that millennials are not substantially more likely than the older age groups to support AI-based professionals—although this could be because they are the workers most likely to find themselves out of a job.

I am comfortable with the idea of AI machines acting as my...

$ Financial advisor

CHINA	🇨🇳	51%
INDIA	🇮🇳	41%
FRANCE	🇫🇷	14%
UK	🇬🇧	17%
USA	🇺🇸	17%

✚ Doctor

CHINA	🇨🇳	42%
INDIA	🇮🇳	27%
FRANCE	🇫🇷	9%
UK	🇬🇧	8%
USA	🇺🇸	11%
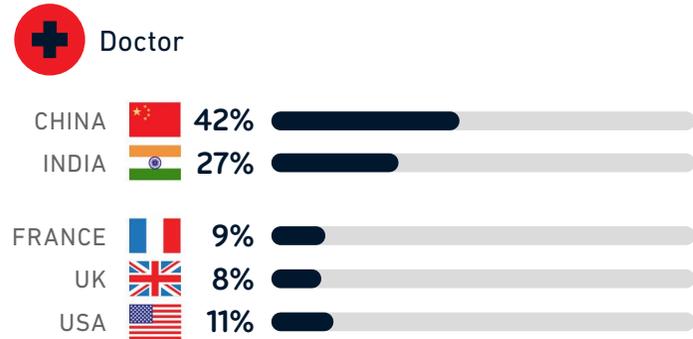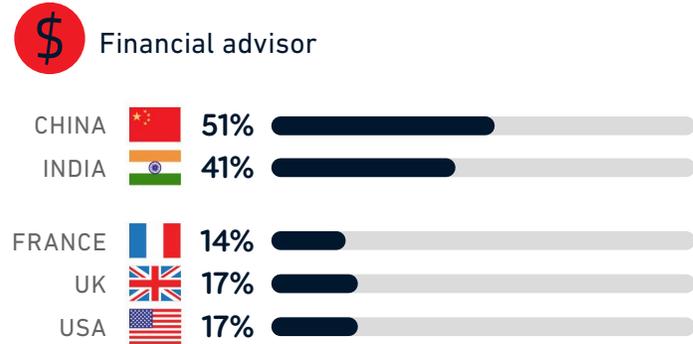
>> BE STILL, MY INFRARED SENSOR! <<

The lights are dim. The dulcet tones of Barry White fill the air. And your Android companion has an unmistakable glint in his or her robotic eye. Do you go for it? It seems not—at least not yet. Only 11% of men and 7% of women in our study said they are prepared to have a romantic relationship with a robot. This could well change, however: 1 in 5 respondents—and a quarter of millennials—believe our world is headed toward a time when humans and robots will develop deep friendships and even engage in romances. This likely will not be terribly far into the future, given that companies already are selling **robot sex dolls**. One business in Barcelona went one better earlier this year by opening a **brothel** staffed by robotic sex workers. The owners are looking to expand to additional cities.

The notion that people could actually fall in love with robots—not just use them for sex—speaks to a growing level of agreement that developers will be able to create androids that not only look human but actually express themselves in human-like ways. Around 4 in 10 Prosumers, males, and millennials believe robots eventually will be indistinguishable from humans. The percentages that agree with that statement are even higher in China (71%) and India (52%). An interesting tension comes out of this: Will robots be so perfect that we will lose our ability to accept imperfections in people? Around a third of our respondents fear that will be the case. Why bother dealing with complicated human feelings and behaviors when a dreamy-looking android will do just as I bid?

% AGREEING STRONGLY/SOMEWHAT

I believe I could have a romantic relationship with a robot

7%		9%	
11%		9%	
		12%	
		9%	
		4%	
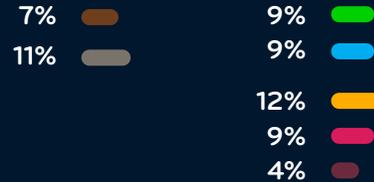
In the future, it will be normal for humans and robots to develop deep friendships and even romantic relationships

| 16% | | 21% | |
22%		18%	
		25%	
		18%	
		10%	

● FEMALES ● MALES
● PROSUMERS ● MAINSTREAM
● MILLENNIALS ● GEN XERS ● BOOMERS
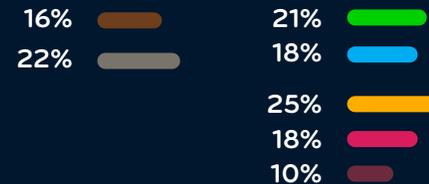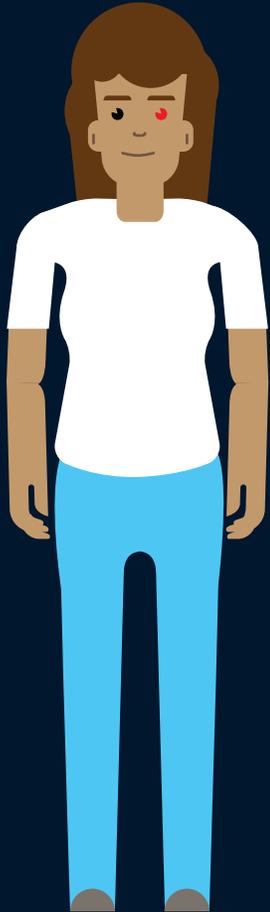
Robots will someday be so lifelike that we won't be able to distinguish them from humans
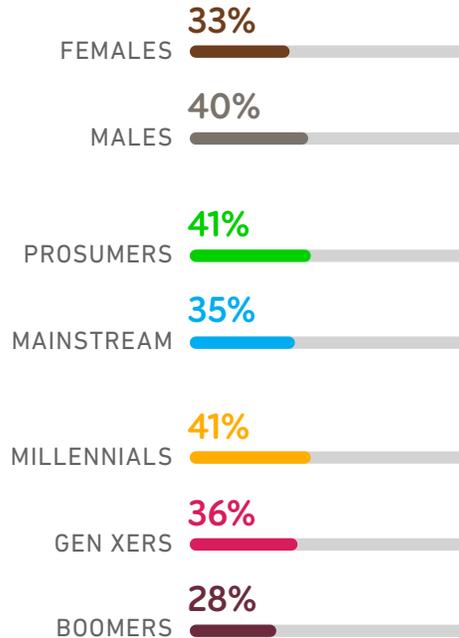
33%
FEMALES

40%
MALES

41%
PROSUMERS

35%
MAINSTREAM

41%
MILLENNIALS

36%
GEN XERS

28%
BOOMERS

When AI and robots are fully embedded in our lives, I worry that humans are going to...

Lose our ability to accept imperfections in people

33% PROSUMERS

32% MAINSTREAM
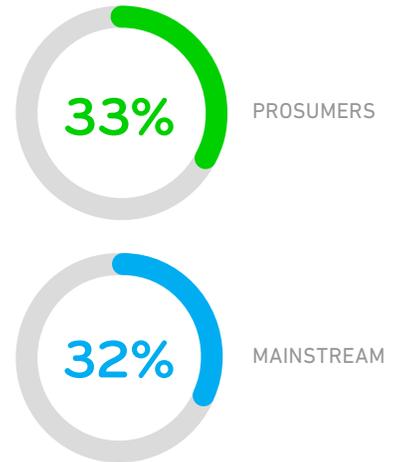
% AGREEING STRONGLY/SOMEWHAT

Implications for Brands

Relationship status: Complicated.

That message came through loud and clear in our survey findings. Most of us love the conveniences and capabilities afforded by our new digital technologies, but we worry about the impact of our growing reliance on them and are concerned that we may not be able to control whatever is coming next. Our new technologies are at once time savers and time wasters, community builders and destroyers, safety mechanisms and security threats.

Within this context, brands seeking to connect with consumers in more enduring and meaningful ways would do well to heed the following advice.

Minimize the leap of faith

Trust has always been the most vital facet of consumer-brand relationships, but it will become exponentially more important as companies get better at capturing and mining consumer data. Providing the option of additional security measures will be a must. Consider Walmart's refrigerator-restocking service. It is being tested among customers who have installed **August Smart Locks** on their homes, enabling keyless entry. The driver delivering the groceries receives a passcode that can only be used a single time. The moment the delivery person rings the doorbell, the homeowner is alerted by a smartphone notification and is given the option of monitoring the entire fridge-filling process via home security cameras and the August app. There is even an automatic notification once the door is securely locked behind the delivery person at the end of the transaction. As former US president Ronald Reagan would have put it, consumers are apt to want to "trust, but verify."

Consider the optics

There are all sorts of ways companies can wring a bit more money out of consumers in a data-driven economy. But just because you can do it doesn't mean you should. There is already some movement toward "**surge pricing**" in grocery stores, now that electronic labeling permits prices to be adjusted throughout the day. That strategy may make sense for the Ubers of the world, but companies will need to tread carefully when trying to apply it to an icy cold soft drink on an especially hot day or a packet of cookies on school holidays—especially since the policy will affect the reputations of both the retailer and the manufacturer brand.

Be there

Is it just us or do other Amazon Echo owners find themselves trying to talk to their digital assistant when away from home? While listening to the car radio: "Alexa, who's singing this?" While out on a walk: "Alexa, what time is sunset?" Sadly, Alexa is stuck back at the house and is unable to hear us. That will soon change if the rumors about **Amazon smart glasses** turn out to be true. The word is that these glasses will stay connected to Alexa wherever the wearer goes. The best way for brands to build enduring relationships: Be there when and where we want you.

Act human

We all know that personality counts when it comes to brands. It also counts when it comes to AI. Most of us want our digital helpers to be anything but robotic. That's why Google doesn't just hire coders to work on Google Home and other chat products; it also **hires** comedians, fiction writers, and empathy experts—all charged with helping to give its products engaging personas.

Create offline experiences

Now that we spend so much time glued to our screens, opportunities to connect with other people and the world are becoming more highly valued. Adding an element of surprise and wonder makes them even more so. In Germany recently, passengers on a train were unexpectedly treated to more than 50 pieces of **performance art** as they traveled through the Saale Valley. It wasn't a branded experience, but it could well have been. The growing popularity of **Escape Rooms**, **Paint & Sip** outings, and **Tough Mudder** endurance events points to people's hunger for nondigital experiences and human interaction. Brands would do well to offer them both.

Encourage disconnects

Plenty of evidence exists to show us that our societal addiction to smartphones and other digital technologies is having adverse effects. Some brands are taking smart steps to combat that. Nintendo has long been both praised (by parents) and derided (by some players) for the message it has built into some of its games: "You've been playing for a while. Why don't you take a break?" Apple is fighting back against distracted driving by enabling iPhone users to have Do Not Disturb mode turn on automatically when they are **behind the wheel**. And a publishing startup in France is encouraging people to reconnect with the written word through **kiosks** that dispense short stories for free.

Be clear about privacy

Given all the breaches in recent years, people have plenty of reason to be concerned about how companies are safeguarding—and using—their personal data. To promote transparency, Unilever has created an entirely separate **website** that provides easy-to-understand explanations of its privacy policy and use of data. That's impressive, but the top prize for a clear **privacy policy statement** must go to instant messaging service Telegram: "We never share your data with anyone. To this day, we have disclosed 0 bytes of user data to third parties, including governments." Hard to beat that.

iLife 2020

Ten advances you can look forward to (or not...) in the next few years:
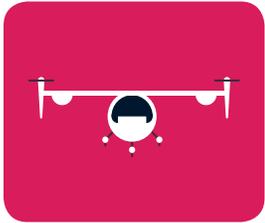
Uber flying taxis
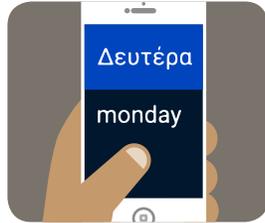
Universal translators
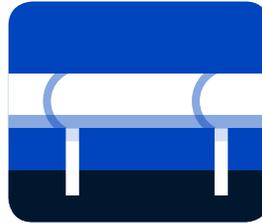
Elon Musk's **Hyperloop** (LA to San Francisco in 43 minutes)
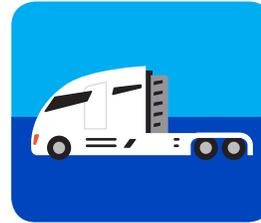
Self-driving trucks

Biometric vehicle access
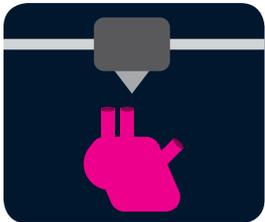
3D-printed organs
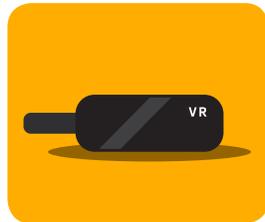
Virtual reality movies
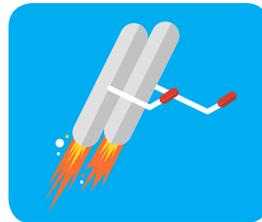
Jetpacks (finally!)

5G mobile technology (3x faster than 4G)

Holographic TV

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Global Chief Marketing Operations Officer,

at rachel.conlan@havas.com

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