Working together is perhaps the biggest trend for 2020.

We have always worked with each other, but now, every department in every organization has the ability (and responsibility) to work together.

Data of every description can be aggregated, analyzed, and turned into action in ways that have never been possible before.

As the volume and velocity of data increase, so do our opportunities to work together to create the world we want to live in.
Introduction

While 2019 may have felt incremental to some, the world has changed dramatically in the past 12 months.

There has been exceptional consolidation in the media business, every major content distributor has launched (or announced) a direct-to-consumer streaming service, there is immense political pressure to regulate big tech, and technological improvements in every field have continued at an exponential pace.

Looking ahead, we have chosen to forgo the buzzword bingo in order to concentrate on our best guesses for the short-term future. Here is how The Palmer Group is thinking about tomorrow.
Artificial Narrow Intelligence

Artificial narrow intelligence (ANI) has progressed to a point where many useful ANI models have been commoditized. Automatic speech recognition (ASR), facial recognition, and recommendation engines are just a few of the cloud services you can purchase on an as-needed basis.

This trend toward commoditization of narrow-purpose AI models is sure to continue. Expect to see ANI pop up in every product and service going forward. ANI is quickly becoming table stakes.

It is believed that, in time, ANI will lead to artificial general intelligence (AGI), a level of machine intelligence that rivals human capabilities. AGI is believed to be the path to artificial super intelligence (ASI), a level of intelligence that exceeds human comprehension. The timeline for this is anyone’s guess. It is not a trend. In fact, it’s hard to find a competent computer scientist who believes that AGI is even close to being developed. But that doesn’t stop people from talking about it.

As with all technology, machine intelligence is improving at an exponential pace. This is the most exciting area of computer science. It is also the most dangerous.

Artificial Control vs. Artificial Intelligence

Social media addiction, gaming addiction, and general online addiction are a disturbing trend. The problem is so rampant that the Chinese government ordered TikTok along with 53 of the country’s most popular video platforms, to introduce anti-addiction tools.

We see anecdotal evidence every day, but this pandemic portends a deeper, even more disturbing trend: the emergence of artificial control.

Science fiction writers love to scare us with tales of AI taking over the world, but that is just science fiction. When the machine intelligence behind an app like TikTok is tuned to maximize engagement, there is little one can do.

Said differently, at the moment, Waze tells us the quickest way to get from point to point. It does not tell us where to go or why. But in our online life, finely tuned algorithms are starting to tell us where to go, and starting to suggest why. This is a trend that should be dealt with immediately. The loss of free will due to digital addiction is far scarier than any science fiction story.
Correlation Marketing

We like to understand why things happen, so we craft narratives to explain things. Machines recognize patterns. Nothing more. The way a machine explains a transaction might be, "When these three things happen, you can be 87% confident that there is a 72% chance that the transaction will be completed." There is no "why." There is just "what is."

The “correlation marketing” trend is growing quickly, and it will continue to gain popularity as commoditized pattern-matching AI models are incorporated into direct-to-consumer sales tools.

Automation, RPA, GAN

People fear that AI, writ large, will soon take many jobs. It will. Generative adversarial networks (GANs) are being trained to do all kinds of cognitive nonrepetitive work that, until recently, many believed could be done only by humans.

Losing jobs to automation is not a new idea. In the past, jobs lost to automation were gained in other fields. This may still be the case by the numbers, but the transformation from the space age to the age of machine intelligence is going to be harder than previous workforce transformations.

In the meantime, the trend is toward low-code and no-code software systems where non-engineers and people with limited coding ability can quickly create applications.

We are seeing integration tools of every description evolving at a remarkable pace, and we are seeing a massive move toward RPA (robotic process automation). RPA isn’t about robots; it is a way to automate older programs (legacy systems) with newer ones. Imagine an old inventory management system being run by a “robot” as opposed to a person. We expect to see a lot of RPA installations in the next few years.
Deepfakes, Post-Truth, and the Dark Side of AI

A deepfake is a piece of AI-created or AI-altered content that is so realistic looking or sounding that it tricks the viewer into believing that what they are seeing (or hearing) is real. The name “deepfakes” comes from the name of a Reddit user who used a deep-learning AI model to put celebrity faces on pornographic video clips in December 2017.

Deepfake technology has evolved quickly. There are now face-swapping apps, such as Zao, FaceApp, and Snapchat’s Cameo. It is just a matter of time before you will not be able to tell if what you are seeing or hearing is real or fake. The technology is going to be wonderful for Hollywood. It will enable us to bring back old movie stars and experience new kinds of entertainment. It is also going to enable all kinds of dark arts, such as doctored security camera recordings, compromising photos, and the creation of millions of fake people (for enhanced online bot use).

Copyright Law, Ownership, and the Legal Side of AI Productions (Music, Graphics, Video)

Generative adversarial networks are starting to create music, video, graphics, and prose. It is unclear if any of this work is copyrightable, or – if it is – who might own the copyright. The trend toward AI creation of background music, industrial videos, internet memes, advertising, and other forms of commercial art is obvious. The United States Patent and Trademark Office and the associated copyright laws are about to be turned upside down. This is to say nothing of the role of journeyman creatives and artisans.
Data Privacy

There is a clear trend toward privacy regulation. GDPR is in place; CCPA, NYS SHIELD, and other state laws and regulations are already on the books or on the way.

There is an assumption that regulations will apply to everyone equally. This is simply not the case. If data collection is restricted, it is very likely that the data-rich will become data-richer and the data-poor will become data-poorer.

The vast majority of Americans agree that data regulation is necessary. Very few citizens understand the size and scope of the problem. This is one of the most important issues of our time. There is no way to make a prediction about data and privacy regulation in the United States.

You have granted a small number of very large companies permission to transform the data you willingly provide them into wealth. Those companies are doing so with exponentially increasing efficiency.

Predictive Analytics Are That Good

When people see an ad for something they have never searched for, but were just talking to someone about, it’s easy to understand why they would think their devices are eavesdropping.

There are many conspiracy theories, but none are as imaginative as what is really happening.

The trend is clear. Fortified with enriched profiles and a remarkable volume and velocity of fresh data, predictive analytics are becoming eerily good. The results are levels of personalization that have been previously impossible. The misuse of personalization techniques is a focus of data privacy regulators. That said, having world-class analytics is quickly becoming table stakes.
If you are thinking about 5G in the context of current technology, you are thinking about it the wrong way.

The promise of 5G is low latency, high-bandwidth connectivity that empowers users to do things wirelessly that cannot be done today.

These use cases include enhanced robotics, real-time interactions, realistic augmented reality, and other computationally-intensive applications that will take advantage of the speed and capacity of the network.

Industrial 5G solutions are being deployed as business cases dictate, but there is a big question about the commercial viability of 5G networks for consumers.

Every major carrier has committed to building out their 5G network. Mobile consultant Chetan Sharma notes, however, “5G arrives at an interesting point in industry’s evolution. For the first time, the network upgrade cycle is taking place amidst declining or flat service revenue growth for the operators. There is a path to revenue growth and EBITDA expansion, but it is complicated, as it requires new business models, infusion of software-driven network management, investment in vertical expertise, and rethinking the business from the ground-up.”

Said differently, 5G networks are coming, but perhaps not as soon as telecom industry marketers would have you believe.
America has been a technology leader for more than a century, but the rest of the world is trending up. China has made incredible advances in machine intelligence. They have a political system that allows for scientific, sociological, and technological experimentation that is not considered acceptable in the United States or Europe. China’s technological capabilities put it front and center on the world stage.

By comparison, the EU feels like a museum. There is no clear innovation strategy. The EU spends more time suing big tech companies than fostering its own technology companies. Add in a highly restrictive regulatory environment, and you have a recipe for technological stagnation, which is an unfortunate but obvious trend.

The United States remains at the innovative forefront in almost every field. There are significant ongoing challenges regarding data governance and technology policy, but these are not new.

That said, there’s an amazing amount of engineering being done around the world. According to octoverse.github.com, more than 80 percent of contributors to public and private Github (open source software) repositories came from outside the United States. In short, the rest of the world is catching up. American technological dominance can no longer be taken for granted.

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The Media Business

The big story is the so-called “streaming media wars.” If there was a war, it is over. There are many business winners. It is the consumers who have lost. The convenience of cable has been replaced with the inconvenience of dozens of individual apps. We expect to see the battle for the best streaming user interface/user experience continue for some time.

There are robust AVOD (advertising-supported video on demand) and SVOD (subscription video on demand) services available, and content budgets are at an all-time high. Some say that the current investment level in high-quality video content is unsustainable, but there are non-traditional companies ordering original content that, for all practical purposes, have no investment restraints.

Even with the vast amount of exceptional video content, it is unclear how many individual services the average American household will subscribe to. It is also unclear how effective mass media can be in an AVOD world. The ramifications for large advertisers may be more profound than the ramifications for the media business.

Of course, streaming is not the end of network television; it is the beginning of the age of “networked TV” as predicted and described in *Television Disrupted: The Transition from Network to Networked TV* (Focal Press, 2006).

Digital Advertising Dollars

While it varies by industry, about 70 percent of all digital advertising dollars are split between Google, Facebook, and Amazon.

According to eMarketer, Amazon’s US digital display ad revenues will exceed $2.7 billion in 2019. Add to that Amazon’s $7 billion of search revenue, and you can see that Google and Facebook have a formidable competitor.

Where does that leave the rest of the programmatic advertising business? As it has been, the trend is toward publishers and platforms that deliver the best performance marketing metrics.
Championing a Cause

Corporations are stepping up and leading in ways we have not seen in the past. This is being well received by consumers.

According to a Shelton Group study, 86 percent of consumers believe companies should take a stand for social issues, and 64 percent of those consumers are “very likely” to purchase from a company that makes that pledge.

Socially responsible companies have a major leg up on the competition when it comes to hiring, too, as 75 percent of millennials would take a pay cut to work for such a company.

Leading in Education

Corporations are doing what academia cannot. While many professions require a postgraduate degree, there are also many professions where the best education you can get is on-the-job training inside an organization that is dedicated to best practices continuing professional education.

Do our children still require a K-12 education? That’s one of the most important questions being asked today.

Perhaps it should be K-8 or K-10. Maybe we need to be teaching our children how to identify specific problems, use best practices search techniques to get the information they need, and think critically about solutions, as opposed to teaching “to the test.”

We can (and should) debate the requirements of baseline skills and how education should evolve for the 4th Industrial Revolution. While others are debating, corporations are starting to play an important role in the creation of a productive 21st-century workforce.
Space exploration used to require the resources of global superpowers. Today, NASA believes it can get back into space for under $35 billion. That is a lot of money, but there are at least 60 individuals in the world who could either write a check for $35 billion or raise or leverage their assets to cover $35 billion. This is to say nothing of the other countries and corporations that could easily get in the game.

While India has set its sights on becoming the fourth country to land a man on the moon, others have the same dream – or are dreaming even bigger. Richard Branson’s Virgin Galactic has already taken multiple trips to outer space.

Elon Musk says he can put a man on Mars in four years. While Jeff Bezos isn’t as optimistic about the timeline, he also has his eyes set on outer space. The trend toward the privatization of space is accelerating.

**AVs and the Future of Ridesharing**

The future of on-demand car services is said to include fleets of AVs (autonomous vehicles, or self-driving cars). You can choose your own timeline. Our guess (which will be as bad as yours) is more than three years and less than 10.

Let’s assume that Uber and Lyft have become the de facto ways to get from place to place in certain areas and that the companies need to purchase (or lease) 200,000 AVs to augment their human-driven fleets. (Choose any large number of AVs; it won’t matter for this argument.)

Owning a car is quite different from paying for a percentage of someone’s time, if that person has a car and chooses to drive it for you. Car owners are responsible for fuel, insurance, maintenance, loan or lease payments, storage when not in use (parking, charging, etc.)... the list goes on and on.

Most automotive consultants whom we have asked say it is unlikely that on-demand car services will transform into profitable rental fleet owners because the economics don’t work. What is the future of ride-sharing fleets? Some say it will become the provenance of big auto companies. One thing is clear: people love on-demand car services, and they are here to stay.
We’re Growing Older by the Day

Approximately 16 percent of Americans are over the age of 65. When this number hits 20 percent, which is projected within the next decade or so, America will be considered super-aged.

The US Census Bureau’s averages don’t tell the whole story, however. Maine is already super-aged, and Florida, West Virginia, and Vermont are almost there. Some analysts are projecting that the number of Americans aged 65 and older will reach 95 million (approximately 23 percent) as early as 2060.

There are many positives to this increased longevity. Aside from the obvious, the gender gap is narrowing, as is the poverty rate.

But there are challenges ahead, including increasing obesity rates, widening economic disparities, increasing numbers of divorced people over 65 living alone, and a demand for elder care that is going to be hard to fulfill.
What’s Next?

We’ve identified a few trends and offered some thought starters to help you make better decisions about the nexus of technology, media, and marketing in 2020 and beyond. Here are just a few theses we are acting on:

- Data is more powerful in the presence of other data.
- Government regulation of data is inevitable.
- Anything that can be hacked will be hacked.
- Anything you can talk to will understand and talk back.
- Access is as valuable as ownership.
- 5G will empower industrial IoT.

We have many more, but the best thing you can do is develop your own theses for the future. Then, decide what you will do differently because you believe in the future you have envisioned. As Alan Kay famously said, “The best way to predict the future is to invent it.”
The Palmer Group works on digital transformation, marketing, strategy, data science, AI, and Machine Learning with Fortune 500 companies like Ford, PepsiCo, Walt Disney, Facebook, Delta Airlines, Charter, Travelers, GSK, Marriott, Viacom, Discovery, SunTrust Banks, and PVH, to name a few.

**Strategy & Solutions**

Deep-knowledge subject matter expertise and strategic counsel to brands, media, advertising, entertainment, technology companies, and trade organizations.

**Digital & Data Literacy Training**

Lectures, labs, workshops, and seminars focused on innovation, technology, media, and marketing by world-class speakers and subject-matter experts.

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We help business leaders turn data into action.

Leadership Development
We curate, stage, and facilitate events and immersive experiences designed to help develop and continuously improve your team's digital leadership skills.

Capability Building
We offer bespoke training courses in digital and data literacy designed to make your team more competitive and more effective.

Data Journeys & Start-Up Showcases
From Silicon Valley to Startup Nation (Israel), we organize tech journeys and start-up showcases curated to accelerate your corporate development.

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