COMMUNICATIONS TREND RADAR 2021

Denialism

Virtuality

Sustainable Communications

Digital Nudging

Voice Interaction

ACADEMIC SOCIETY
FOR MANAGEMENT & COMMUNICATION
An initiative of the Günter Thiele Foundation

TABLE OF CONTENTS

EDITORIAL

Megatrends such as globalization and digitalization have accelerated the process of change for organizations over the past decade. The impact of the COVID-19 pandemic in 2020 has turned many fundamental beliefs upside down in just a couple of months. Entire industries, including aviation, tourism, and the cultural sector, have been deavastated and are struggling to survive.

It's essential for communication leaders to recognize such developments, understand how they influence their organizations and their work, and seize the opportunities they offer. It's not without reason that the communication department is always expected to have its finger on the pulse.

But let's be honest. How much time can communicators devote to monitoring the trends evolving around them? Or to identifying the developments most relevant to them? Our desire to support communication professionals in this respect and provide scientifically proven insights into trends was what prompted us to launch a new annual research project – the Communications Trend Radar. What's more, we concentrate on trends in the fields of business management, technology, and society, which are harder to grasp for communicators than developments within the communication sector.

Since January 2020, a team of researchers at the German universities of Leipzig and Duisburg-Essen has been observing emerging trends on a scientific basis. We have scanned hundreds of very recent publications in science and business, selected the most relevant issues, and rated them according to their impact on corporate communications. As a result, we have identified five trends that we believe will change communications profoundly or offer new opportunities for communicators to position themselves as thought leaders.

We would like to thank Sünje Clausen, Florian Brachten, and Daniel Ziegele for their dedicated research, our corporate partners who have provided valuable insights into the trends, and Karen Berger from the Academic Society for Management & Communication for developing this publication.

The research team of the Communications Trend Radar 2021 (from left to right): Ansgar Zerfass, Daniel Ziegele, Sünje Clausen, Florian Brachten, Stefan Stieglitz

Stefan Stieglitz　　　　**Ansgar Zerfass**

THE MOST RELEVANT TRENDS FOR CORPORATE COMMUNICATIONS IN 2021

Denialism	Virtual Corporate Communications	Sustainable Communications	Digital Nudging	Voice Interaction
Society	Management	Management	Technology	Technology

METHODOLOGY

The Communications Trend Radar is an applied research project focusing on trends that impact corporate communications. It was initiated by the Academic Society for Management & Communication in collaboration with Leipzig University and the University of Duisburg-Essen. The study was launched in January 2020 and will be repeated annually. The overarching goal of the Communications Trend Radar is to help communication leaders prepare for trends that look set to influence their work.

A **trend** refers to developments which are predicted to unfold over several years and have a more lasting impact than short-lived fashions and hypes. Such trends may originate from practices in disciplines adjacent to corporate communications or from scientific research maturing into practice. Therefore, the Communications Trend Radar specifically focuses on current professional and academic discourses in the areas of management, technology, and society.

▶ **Society:** Trends emerging in different domains of public communication, opinion formation, and values that might change people's attitudes and behavior, and affect expectations regarding businesses, their activities, and their communication.

▶ **Management:** Trends in strategic management and organizational design that communication professionals should be aware of.

▶ **Technology:** Technological developments that could either impact corporate communications or be used by communication professionals.

Research process

① **Sources & screening:** First, we selected information sources which provide relevant insights into the professional discourse in the areas of management, technology, and society. These sources primarily include recent publications from scientific journals and conferences in the respective domains, but also selected newspapers (e.g., The Economist, Die Zeit, FAZ), magazines (e.g., Harvard Business Review, Wired), social news sites (e.g., Reddit Science), blogs and websites (e.g., ReadWrite, The Next Web), whitepapers, and corporate trend reports. Sources were included based on their scientific reputation (impact scores, rankings), or their general reputation and website traffic (Alexa Internet). All selected sources were monitored and screened for potential trends between March and July 2020.

2 Trend profiles: Each potential trend was systematically documented in a trend profile consisting of a brief description and several criteria estimating the trend's relevance to corporate communications. Specifically, we assessed the impact of the trend on the corporate communications function (e.g., governance, goals, competencies), processes (e.g., platforms, formats, stakeholder interaction), and management (e.g., content processes, cost structures). We also considered the extent to which a trend offers communication leaders an opportunity to raise their profile within the company. In total, 42 trend profiles were compiled during this phase.

3 Scoring: Based on the criteria detailed in the trend profiles, a scoring method was developed that was used to rate each of the trends. Scoring was conducted individually by a total of eight researchers and members of the Academic Society involved in the Communications Trend Radar project. Based on the scores and qualitative feedback on the trends, ten trends were selected for further consideration.

4 Selection: These ten trends were first discussed among the Communications Trend Radar team at a workshop in July 2020. Each team member then voted individually for the top trends in the areas of management, technology, and society. We proposed five trends for 2021 (see graphic on the left) based on the outcome of this process.

5 Reflection: These trends were examined further and later discussed with approximately 20 communication leaders during an online workshop in November 2020.

6 Report: All trends were analyzed and described in more detail in this publication.

Outlook: The trend selection process will be restarted in 2021 to identify the most relevant trends for corporate communications in 2022. Furthermore, two of the five trends for this year – virtual corporate communications and digital nudging – will be examined in more detail. (see p. 34)

Selection process for trends in the Communications Trend Radar 2021

1 Search for trends in international professional and academic discourses

3 Scoring process to evaluate trends

5 Discussion with corporate partners

2020

2 Systematic documentation in trend profiles

4 Workshop to select most relevant trends

2021

6 Publication of the Communications Trend Radar
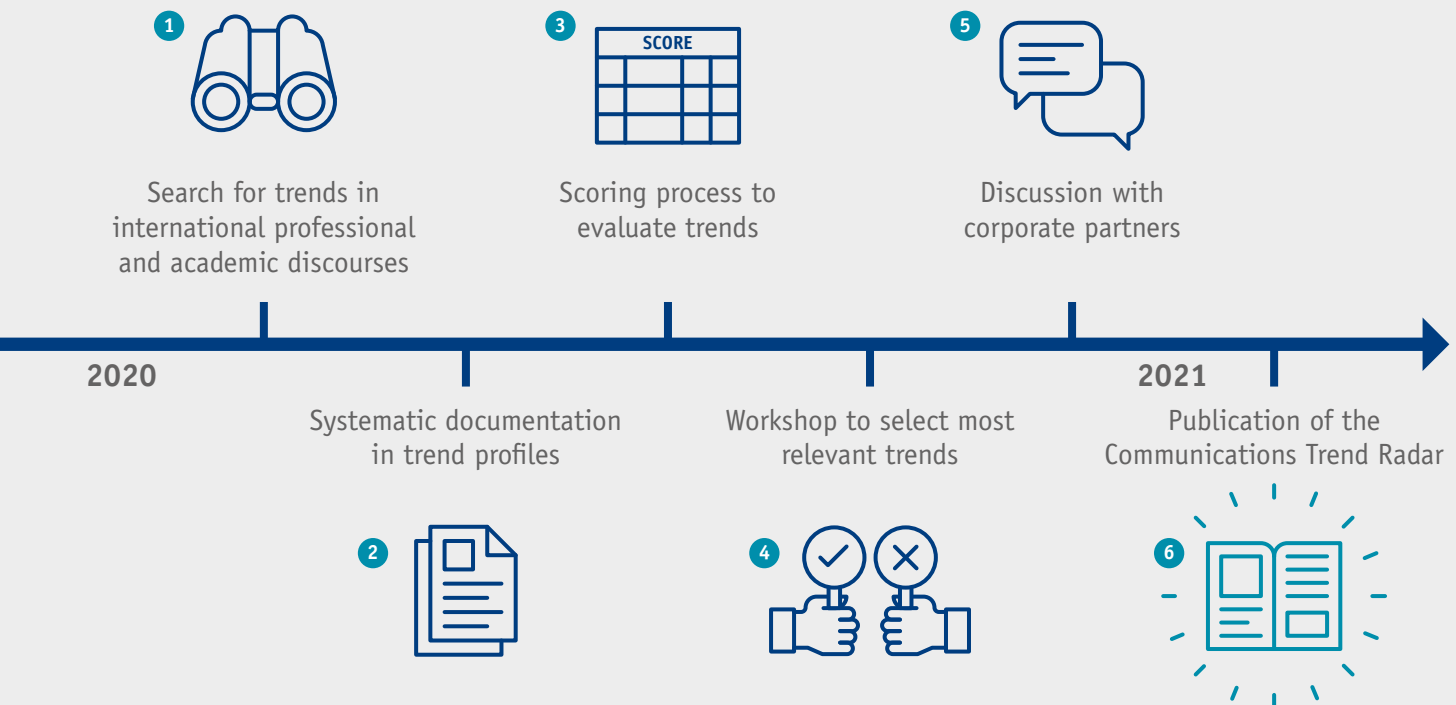
DENIALISM

Why stakeholders deny obvious truths and facts

Denialism - a well-known phenomenon is gaining importance

Denialism is a psychological defense mechanism in which people deny universally valid facts and truths. Instead, denialists prefer radical and controversial ideas such as climate change having been invented by scientists to generate research funding, coronavirus being an invention by the pharmaceutical industry, and the COVID-19 vaccine being used to implant microchips in humans in order to monitor them. Opinions like these have been scientifically proven to be wrong. But while most people agree that these statements are false, there are others – denialists – who believe these conspiracy ideas and keep coming up with new ones.

Denialism isn't a new phenomenon. Belief in conspiracy theories and the rejection of facts have existed for over 800 years – just think of ritual murder libel or the witch trials in the Middle Ages. But today,

denialism is more prevalent than ever before. This is numerically confirmed by the results of a representative survey conducted in Germany by the Konrad Adenauer Foundation (Roose, 2020):

► 8% of the German population deny that climate change is intensified by human influence.
► 19% of the population do not believe that the Russian intelligence service kills people abroad, contradicting police investigations into several murders.
► 15% of the population believe that a measles vaccination is more dangerous than the disease itself, refuting long-term medical findings.

Indeed, in times of high complexity and uncertainty, denialism tends to increase. Moreover, denialists can now spread their ideas faster and more easily on social media platforms and messaging apps such as WhatsApp and Telegram. They garner more media attention by linking their stories to hot topics such as

the corona pandemic. Online communication is often complemented by public gatherings and demonstrations such as the *Querdenker* protests in Germany, where denialists create a public stage for themselves and move into the spotlight. To exacerbate polarization, these protest groups promote an anti-everything attitude against politics, corporations, and other institutions. In fact, it has become clear that denialists are able to shape the public discourse, something which threatens the social consensus. One prominent example is the 2020 US presidential election, which showed how ignoring official election results undermines trust in democracy.

What researchers know about denialism

The scientific concept of denialism can be traced back to the brothers Mark and Chris Hoofnagle, a physiologist and a lawyer from the United States. They defined denialism as "the use of rhetorical techniques and predictable tactics to erect barriers to debate and consideration of any type of reform regardless of the facts" (Hoofnagle & Hoofnagle, 2008). Since then, a great deal of knowledge about denialism has been amassed, especially in the fields of psychology and human behavior. Urgent questions about *who* denies scientific facts, *why* the common consensus is denied, and *how* denialists build and maintain their picture of the world can already be answered thanks to a number of studies.

The above-mentioned survey by the Konrad Adenauer Foundation shows the sort of people who are particularly likely to deny scientific data and facts, emphasizing three **characteristics** (Roose, 2020):

1 **Age:** Older people are more likely to believe in conspiracy ideas and distrust established facts.

Denialism was most prevalent in the survey among the 65-and-over group.

2 **Education:** People with lower formal education are more likely than others to believe in conspiracy ideas.

3 **Origin:** People with an immigrant background are more likely than others to believe that the world is being controlled by secret forces.

Denialists try to create a world view that is coherent for them. They do so by reducing complexity, adding untruths, and believing conspiracy ideas. Other reasons for denialist behavior include self-interest (e.g., financial incentives or acceptance in social groups), religion, and self-protection against mentally disturbing facts and ideas (Kahn-Harris, 2018). A distinction must be made between passive denialists, who believe in conspiracy theories and reject consensus for themselves, and active denialists – people who publicly position themselves as denialists, who organize and speak at demonstrations, who encourage people to act, and who fabricate and spread conspiracy stories.

> » When people feel that they have no control, they try to find strategies to deal with it – and conspiracy stories can be one such strategy. The conspiracy narrative structures the world. «
>
> *Pia Lamberty, Social psychologist at Johannes Gutenberg University, Mainz, Germany*

Tactics used by denialists

When observing passive and active denialists, five different **tactics of how denialists** develop and sustain their worldview were identified that often go hand in hand (Diethelm & McKee, 2009):

▶ **Using conspiracy ideas:** Instead of arguing with facts or referring to scientific knowledge, denialists invent their own narratives. In most cases, denialists modify the truth and invent a conspiracy to suppress the actual truth. Numerous examples refer to the COVID-19 pandemic; for

example, wearing face masks to protect against the virus is transformed into an instrument of suppression by the powers that be.

▶ **Cherry picking** describes a technique whereby denialists only pick those facts, reports and views that match their own outlook. Often these "alternative facts" come from doubtful sources or fake experts.

▶ **Fake experts** are people who pretend to be experts on certain topics without having the necessary expertise as well as people paid to back up or lend credibility to the "conspiracy". Both mechanisms frequently include the marginalization of real experts. Denialists sometimes demand impossible pieces of evidence from genuine specialists in order to undermine them and strengthen fake experts, a tactic also called "moving the goalposts."

▶ **Creating impossible expectations:** Denialists often use a tactic of setting very high expectations for scientists, e.g. demanding proof of the effectiveness of face masks against coronavirus. Whenever scientists successfully respond, denialists merely set higher and higher expectations until it's (almost) impossible for science to reply. This is when fake experts enter the stage and provide their "denialist answers".

▶ Lastly, **misinterpretations and logical fallacies** are often part of denialism. Some conspiracy theorists saw a link between 5G mobile networks in China and the spread of coronavirus while ignoring the fact that the disease also spread in countries without 5G installations.

Even if the denialists' narrative sounds ridiculous to the majority and is easily exposed, the combination of psychological strategies is sometimes powerful enough to make people believe it. Since this poses new threats to society, this is an issue that urgently needs to be addressed.

Five tactics of denialists

Conspiracy ideas

Cherry picking

Fake experts

Creating impossible expectations

Misinterpretations and logical fallacies

Denialists use a variety of tactics to generate, sustain, and spread conspiratorial ideas and beliefs. The five tactics are often combined into a complex of denialism.

The boom in denialism and its relevance to the corporate sector

Conspiracy ideas are no longer a niche phenomenon, but are booming and have entered mainstream society. Denialism has become a confusing and increasingly complex issue – for society as a whole, but also for corporations. There are several reasons why denialism is a key trend to watch for corporate communications in 2021:

▶ **The level of denialism:** Both the variety and the quantity of denialism have mushroomed in recent years. The denial of facts and evidence now affects almost all areas of society, politics, economics, and academia. Examples such as the 2016 and 2020 US elections as well as the COVID-19 pandemic have also highlighted the enormous media coverage of such issues.

▶ **Research gap in corporate communications:** Denialism is already being researched in many areas – not only psychology and human behavior research, but also journalism and political science. What is still largely unexplored, however, is its impact on corporate reputation, stakeholder communications, and managing communications in such situations.

▶ **Companies as a target:** In addition to politics and science, denialists are increasingly targeting companies and industries. In the past, this was particularly true of pharmaceutical and food companies. However, an increasing anti-everything attitude ultimately leads to denialism affecting any economic sector or business.

▶ **Unpredictability:** Even if we know something about who denialists are, what they do and why, denialisms remain unpredictable. Denialists follow an irrational worldview. As a result, the phenomenon is difficult to grasp – especially for top managers in corporations who are mostly rational thinkers. This is where communication leaders need to step in by explaining denialism and its consequences, and giving advice.

▶ **Danger from all sides:** Denialists aren't necessarily external to corporations. As the number of denialists grow, so does the likelihood that employees might express denialist attitudes in internal meetings and impact organizational decisions. Moreover, corporate reputation might be threatened by employees acting as denialists in the public sphere. Communication strategies are needed to deal with this.

Communicators are in the lead and must take a stand

Denialism will become a very important topic for communicators in the next few years. It's crucial for communication leaders to find strategies to deal with denialists. Initial ideas on how to approach them can be found in the literature. First of all, denialists should be allowed to have a voice, but they should not be allowed to take the stage. Furthermore, it's vital to grasp denialists' intentions and tactics. Pointing out their tactics and exposing methods of denialism in public are recommended (Diethelm & McKee, 2009). Dealing with denialists is a balancing act, which is precisely why seasoned communicators are required. They must be able to understand denialism, explain it to others, and manage it in practice:

▶ **Dealing with denialists:** Handling denialism correctly isn't easy. Denialists who take action against companies are surprisingly diverse and so there is no one-size-fits-all solution. However, according to experts, the most promising approach is to beat the opponent at their own game. This means not immediately jumping on conspiracy ideas as this will only strengthen them. What counts are facts and logic. The focus should therefore be on proven arguments and on uncovering authors and sources behind denialism.

Denialists can then be exposed with their own tactics, thus leading them into an argumentative dead end where they cannot get anywhere with a conspiracy construct.

► **Work of persuasion:** Changing a denialist's mind takes time and resources, and facts are needed to challenge the denialist's constructed worldview. Discussion is required on the denialist's level without labeling them mad or a conspiracy theorist. It is helpful to emphasize that information is incorrect without talking about conspiracy theories, to offer fact-based alternatives, and to explain one's own view with demonstrative evidence.

► **Protecting the company:** One way of preventing attacks by denialists is to position a company appropriately in the public sphere. This can be done in various ways. For example, a considered presentation of the CEO gives the company a face when confronting denialists. The same is true of positioning the company in public discourses, for instance by supporting public campaigns or activists. Similarly, organizing stakeholder dialogues can be helpful. A wide range of topics can be discussed ranging from tackling climate change to technological issues such as artificial intelligence or cybersecurity. Here, authenticity and credibility by means of facts and evidence are paramount.

► **Helping employees:** Few people want to be sucked into the vortex of conspiracy theories, and even fewer pursue them for recognition or even financial benefit. Yet it happens all the time. An additional task for communications could therefore be educating and helping employees. This could take the form of issuing guidelines on how to recognize and uncover conspiracy theories on the web. But it also means that public communication about the company and critical topics must be closely monitored. A worst-case scenario emerges if an employee acting as a representative of the company attracts attention by spreading denialist content. Communication leaders can help to mitigate such risks.

READING RECOMMENDATIONS
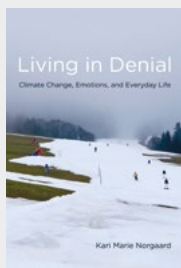
Kari Marie Norgaard: Living in Denial – Climate Change, Emotions, and Everyday Life (2011)
Kari Norgaard, one of the leading researchers on denialism, uses the example of a region in Norway to analyze why people who know about climate change are often unable to translate this knowledge into action. Norgaard attributes this to a phenomenon called "socially organized denial". Her book illustrates a disconnect between knowledge about climate science and beliefs held in political, social, and private life.

Katharina Nocun & Pia Lamberty: Fake Facts – Wie Verschwörungstheorien unser Denken bestimmen (2020)
This popular German-language book was written by a political activist together with a psychology researcher. The authors discuss both old and new conspiracy theories; they describe how people from the mainstream become radicalized by conspiracy theories and reject democracy at large.

What does the denialism trend mean for companies like Bosch?

We are moving from a Holocene, in which humans were part of a more or less constant natural environment, to an Anthropocene, in which humans are increasingly influencing nature and the biosphere while also creating completely new worlds of language and symbolism through digital technologies. Denialism is a significant side-effect of this paradigm shift as it changes the fundamental logic of how public opinion is created and thus has fundamental effects on corporate communications. This is especially so for companies with a business model based on scientific research and technological expertise such as Robert Bosch GmbH. It's no longer sufficient to base communications strategies on convincing facts and objective data from the natural or social surroundings. Whether stakeholders accept company positions or not depends in times of denialism on a credible company purpose and also on the willingness to engage in respectful dialogue.

What is important from your point of view when dealing with denialists? How does Bosch's corporate communications prepare for this?

Denialism means both challenges and opportunities for corporate communications. It's now more difficult than ever to agree with stakeholders about fundamental questions such as how to deal with challenges like climate change, how to fully harvest the potential of new technologies such as AI, or how to strike a balance between the economic, ecological and societal dimensions of entrepreneurial responsibility. At the same time, there is an opportunity to

make a difference with carefully selected clarifying contributions to complex debates – as Bosch does in the case of the future of mobility or the usage of artificial intelligence with studies, polls and opinion articles – and physical as well as virtual dialogues, in which top management exposes itself to fundamentally divergent views. To move corporate communications from the Holocene to the Anthropocene world, we have to find new shared ways of thinking, acting, and working with stakeholders.

How do you predict this trend will develop?

Denialism – like fake news and filter bubbles – is a human reaction to the significantly increased complexity of the postmodern age, fostered by the new communication channels and platforms of the digital age. The human brain has an insatiable desire for coherence in order to achieve a state of minimum energy consumption. Faced with a lack of coherence, we humans grow afraid and strive to eliminate the incoherence around us. In times of tremendous change in the economy, politics, and society simultaneously, it's very tempting to ignore reality that generates fear, or at least to adapt it to one's own hopes and wishes. This trend will intensify, not fade. In the short term, we can expect to see far more heated debates about companies and their activities, making businesses and their CEOs even more careful in their public positioning. In the medium and long term, we can expect corporate communications to find better ways to deal with denialism. A willingness to take and hold strong positions in line with the company purpose and to communicate them against the headwind of the zeitgeist will be required while keeping in close touch with those stakeholders who are critical but also constructive.

VIRTUAL CORPORATE COMMUNICATIONS

Finding new ways to communicate and collaborate in virtual contexts

The many faces of virtualization

"Let's do it virtually!" has been a common phrase and a widespread way of doing things in businesses around the world since the first half of 2020. The pandemic has accelerated the digitization of workplaces so rapidly that video calls, virtual conferences and digital get-to-gethers are already considered the "new normal".

In many countries, communication within and between organizations shifted to the virtual realm post lockdown. According to a research report by the German Federal Ministry of Labor and Social Affairs (Bonin et al., 2020), the proportion of employees in Germany working exclusively or regularly from home has increased from around a fifth to 36 percent. Interactions with internal and external stakeholders are affected, too, as are established formats such as face-to face team meetings as well as events for business partners and customers. Virtual alternatives have been created for trade shows, conventions, and conferences. However, it has become difficult for businesses to cultivate relationships that need privacy and trust to flourish, including with interest groups, activists, politicians, and researchers. Stakeholder dialogues and similar settings are useful in this respect – but transferring such formats into the digital world is much harder than digitizing professional workflows.

As a result, **virtual management** has become a central challenge for both communications and other departments. It includes virtual collaboration in internal teams as well as with agencies, freelancers, and service providers. Moreover, virtual leadership becomes a key issue when executives operate from home (Hill & Bartol, 2018). This is closely intertwined with corporate culture and employee engagement (Howard-Grenville, 2020). Both are necessary to foster collaboration and leadership with digital means, and they are being modified by virtual practices. After all, something which had been established for years and usually worked smoothly is suddenly no longer possible.

Communication leaders and their staff, however, face an additional challenge: the execution of virtual communications between the company and its external and internal stakeholders, i.e. offering **virtual formats for stakeholder communications** (Chodor & Cyranski, 2021). They must design multiple dimensions successfully: virtual workflows, management and leadership processes for corporate communications, and virtual communication and relationship management with various stakeholders.

What virtualization means for corporate communications

Virtual meetings, virtual events, even virtual Christmas parties: virtuality has become a buzzword in the business world. But what does virtualization actually mean? And what does it imply for corporate communications?

Virtualization generally means that something resembles a real object in its essence or effect, but without existing in its physical form (Woolgar, 2002). Unlike the real world, the virtual world is a simulated, computer-based environment. This logic can be applied to leadership, collaboration, and communication formats as well. Using the example of a traditional public relations format, this means that a virtual press conference must fulfil the purpose of a live press conference. In other words, it should still be a media event where an organization talks to a limited number of registered journalists and answers their questions. The difference is that there is no physical presence and so certain aspects such as informal conversations before and after the conference are omitted.

Virtualization as such is complex because routines are altered, logics are different, and typical advantages of established formats no longer apply. These changes need to be compensated for by other features of virtualization. This is also evident in corporate communications. Many formats for stakeholder communications are now offered online. Communication leaders report that things such as virtual events with tens of thousands of guests, team meetings via video conferencing, and new podcasts for employees have been developed very quickly during the pandemic. Bearing in mind, that in most cases the staff relied on trial and error and had little time for preparation, they have been surprisingly successful. Obviously, many solutions cannot fully compensate for the advantages of face-to-face formats, as can be seen from the desire to return to them, at least for some purposes. Nevertheless, virtualization has found its way into corporate communications and is expected to persist in a hybrid world consisting of both virtual and real elements.

Virtuality will remain an integral part of corporate communications

The end of the pandemic is unlikely to also mean the end of virtual corporate communications. Accordingly, virtual corporate communications will be a key trend in 2021. We believe that, rather than a short-term hype, it's an important development that will continue to impact many aspects of communication processes and management. What's more, communication departments stand to benefit from virtualizing their work in many ways:

▶ **Ubiquity:** Virtual corporate communications is a reality and can't be avoided at the moment. Dealing with virtual formats will remain a key challenge when managing corporate communications in the near future. Those who ignore it and fail to develop suitable solutions are at risk of losing touch with their stakeholders and competitors.

▶ **Lack of orientation:** At the same time, due to the novelty of the phenomenon, there is a lack of scientific descriptions and best practices providing orientation. The majority of communicators have started producing podcasts and organizing virtual live events and online meetings. However, these are seldom established, proven practices, and have instead been improvised within a very short time. The systematic consideration of success factors for virtual formats could help communicators to identify sustainable, successful approaches.

- ▶ **Advantages of virtual formats:** After initial implementation, communication departments need to push virtual solutions forward to fully exploit their potential. Advantages include:
  - ✔ Significantly larger audiences
  - ✔ Overcoming boundaries as virtual formats can involve stakeholders around the world
  - ✔ Saving time due to less travel and fewer physical meetings, freeing up time for other tasks
  - ✔ A positive impact on the environment if virtual solutions have a smaller carbon footprint than live events, which often include travel, facilities, and catering

- ▶ **Changing habits and playgrounds:** We know from technical sociology that establishing new practices alters the habits of users and their expectations, yet also relationships and power balances between those involved. Virtualization will thus change the playground against which companies interact with their stakeholders. Understanding these developments will be essential for the survival and sustained success of any organization. This is where corporate communications becomes strategic (Zerfass et al., 2018), and communication leaders can leverage business value, setting themselves apart by a merely operational adjustment of communication practices.

Communication leaders must respond to different needs

Even if virtuality may sound like a technology topic, the issues involved go far beyond the selection and provision of a suitable infrastructure. Communication departments must provide solutions for virtual collaboration and communication with many different people along internal workstreams and with a variety of stakeholders. In doing so, both the company goals and the needs of stakeholders and recipients must be taken into account. The requirements of employees in terms of motivation and engaging with a company are quite different from those of a journalist requesting a specific piece of information. Requirements for informal but virtual one-to-one meetings in the field of public affairs might be entirely different from those for multi-stakeholder dialogue. Practitioners must create specific solutions if virtual corporate communication is to be successful in the long term.

At the same time, expectations towards communication departments will grow. Virtual and real formats will continue to exist in parallel in the future, so events need to be offered both virtually and in the real world, meaning even more resources will be needed than before. Finding the right mix with limited resources to satisfy the different needs of numerous stakeholders will be crucial.

What lies ahead for corporate communications?

In many areas, virtual communications already run very smoothly. For some formats, there is an urgent need to catch up; for other aspects the next step must be taken now, or the right balance must be found. There are at least three challenges ahead:

- ▶ **Stakeholder dialogues:** Organizing platforms for personal, confidential, and topic-centered communications with key stakeholders in a protected environment is an established practice within corporate communications. Many companies use stakeholder dialogues to build relationships with activists, opinion leaders, and representatives of different groups in politics and society. Such formats help to understand interests and to pre-clarify options for action. They are especially important when the legitimacy of a company or industry is challenged. However, transferring stakeholder dialogues to the digital world is much more complicated than substituting communication processes with stakeholders that build on common routines and long-term relationships (e.g., with employees, customers, and journalists). The critical nature of stakeholder dialogues for corporate success in diverse and fragmented societies suggests that viable solutions are needed.

> *» Virtual town halls are a great technical solution to communicate with employees internationally and across our different locations. The chat-box in particular is used a lot and significantly increases the quantity of questions over a face-to-face employee event, which is partly due to the possibility of commenting anonymously. However, I believe the quality of communication suffers, as no real dialogue can take place and questions are dealt with one after the other. The reaction of participants to the answers remains hidden. Interjections or applause that make a debate lively are not possible. The only indication of the mood among the staff is the language used in the chat. Here, the tone is often harsher than it would be in a real event. «*
>
> *Stefanie Hansen, Head of Communications Austria, Germany, Switzerland, BP Europa*

▶ **Employee involvement:** As for employee communication, many virtual formats have been introduced to keep employees informed and motivated in the short term. But looking ahead in the long term, the question arises how a strong corporate culture and identification with the employer can be promoted among employees who don't work in the office every day, or who work exclusively from home. How can motivation and commitment be strengthened through virtual communication? This needs to be explored, and insights will show what practices of internal communications need to be adapted or reconfigured.

▶ **Finding the right balance:** As well as generating new, virtual communication formats and events, the pandemic has already led to a noticeable oversupply of some offerings. There are free webinars for nearly everything: many register, fewer attend, and it remains unclear how many participants really pay close attention to them on their screen. This has consequences. A fatigue of digital formats is emerging. The desire is growing to return to face-to-face formats where possible. Communication leaders report that both employees and journalists are becoming more impatient. "Zoom fatigue" – exhaustion resulting from the monotony of lockdown routines and permanent videoconferencing – is on the rise (Nadler, 2020). Practitioners should therefore consider which of their offerings are crucial in terms of presence, which are best staged digitally, and which can be dispensed with altogether – to protect both their own resources and those of their audience.

» Today, leaders aren't those who are managers, but those who have followers. This is because employees in an organization are choosing their leaders rather than vice versa. They are looking for influential characters regardless of their hierarchical position or location. For this reason, virtual communication with employees via social media is gaining in importance. This has multiple advantages: greater reach; a broader, stronger impact; direct, non-hierarchical, interactive exchange; and relatively lower costs per person. When it comes to responsiveness, our experience shows that comments from Germany are a notch more critical than those from participants of other cultures. «

Dr. Felix Gress, Senior Vice President Group Communications and Public Affairs, Continental

READING RECOMMENDATIONS
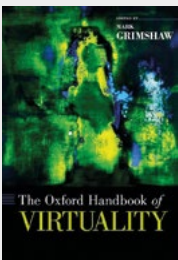
Mark Grimshaw (Ed.): The Oxford Handbook of Virtuality (2014)
The articles in this handbook outline the broad diversity of concepts and applications of virtuality. The contributors discuss differences between virtuality, reality, and actuality using examples such as ethics, emotions, economic potentials, and relationships. Mark Grisham is a professor in the Department of Communication and Psychology at Aalborg University in Denmark.
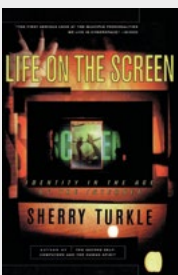
Sherry Turkle: Life on the Screen – Identity in the Age of the Internet (1997)
Sherry Turkle's "Life on the Screen" is a classic read of internet research from a psychological standpoint. Published before the turn of the century, this study on the psychology of online life is more topical than ever in times of virtual team meetings, online events, and permanently working from home. Turkle moves the discussion away from formats or tools to the human being.

SUSTAINABLE COMMUNICATIONS

Towards an ecological footprint for communication departments

Sustainability – a key driver for business performance

Few topics have been debated as emotionally as climate change over the past few years. Millions of Fridays for Future activists have marched through the streets calling for more environmental protection. The United Nations calls it the world's greatest challenge. Opponents, however, speak of "climate hysteria" – the 2019 misnomer. Even if the debate has been pushed back by the COVID-19 pandemic, the issue of environmental sustainability is more present than ever.

The high importance of sustainability for companies in all industries is indisputable. This is true for each aspect of sustainability: environmental, social, and economic issues. In particular, ecological sustainability – in the sense of the long-term, gentle use of natural resources – is expected to be an integral part of corporate strategies. Be it CO_2 reduction, renewable energies, supply chains, or making the value chain more sustainable, those companies without answers at hand run the risk of losing **public legitimacy.**

At the same time, sustainability management can help to build **intangible assets.** The Global Climate and Sustainability Trends Report by Weber Shandwick (Meszaros, 2019) states that sustainability isn't only an obligation to prevent risks such as loss of acceptance, but also actively offers opportunities such as building reputation or increasing brand value.

Stakeholders expect sustainability

The growing relevance of sustainability is driven by various stakeholders simultaneously:

► **Investors** are getting more serious about sustainability. Robert E. Eccles, considered the world's foremost expert on integrated reporting and an authority on how companies and investors can create sustainable strategies, concludes in one of his studies that environmental, social, and corporate governance (ESG) "is now a priority for these leaders and that corporations will soon be held accountable by shareholders for their ESG performance" (Eccles & Klimenko, 2019, p. 108).

► Sustainability is also a pressing issue for **customers and clients.** Customers are developing a sensitivity for sustainability and are willing to punish misconduct. This has been demonstrated by recent boycott

calls and social media train wrecks. According to a survey by the market research company Quantilope (2020), more than 80% of the population in Germany, China, the US, and the UK believe that environmental protection is one of the most important issues of our time. What's interesting for the private sector is that almost two thirds of the customers surveyed also plan to be more sustainable themselves. They intend to buy and consume products and services while paying close attention to their carbon footprint.

► **Employees and applicants** are also calling for more sustainability, especially talents and young professionals. More and more young people want to take the aspect of sustainability into account when choosing a career. Even though a company's location and individual salaries are still regarded as important by millennials, a lack of sustainability can lead to inner tensions and dissatisfaction among employees (Gallup, 2019).

► **NGOs and activists** are forcing governments and companies to develop concrete sustainability strategies. Their actions focus enormous public attention on matters like climate change, renewable energy, sustainability goals, etc. There is a particular threat as many NGOs and activists are challenging economic and social policies of corporations and criticizing economic growth (O'Brien et al., 2018).

► Expectations regarding sustainability are also rising among **politics and governments.** The global community has signed up to the United Nations Sustainable Development Goals. Since these targets apply to everyone and everyone's contribution is needed, companies are also being held more accountable.

What is practiced today: Sustainability communications

It's no surprise that sustainability isn't only part of corporate strategies, but also a topic for communication departments. Climate protection, sustainable sourcing and production, and similar content has already been dealt with by corporate communications for a few years. *Sustainability communications* is an established practice in most corporations. It refers to sustainability as a core topic for communication campaigns, branding, stakeholder dialogues, and corporate reporting. The institutionalization of sustainability communications has been intensified recently, partly due to political regulations and standards like the IIRC's framework for integrated reporting (Köhler & Hoffmann, 2018).

What is needed in the future: Sustainable communications

Companies and other organizations **measure and document their ecological impact in** order to meet stakeholder demands and differentiate themselves from competitors. Measuring sustainability is nowadays broken down from a global corporate level to the departments and functions with specific indicators (Pandey et al., 2011; Vereecken et al., 2010). Concrete targets (e.g., CO_2 reduction in supply chains, climate-neutral production), measurement

» *Sustainability has moved beyond compliance with laws and regulations and improving bottom-line performance to be a core driver of reputation and brand value, attract and retain top talent, and respond to consumer preferences.* «

Jim Meszaros, Executive Vice President, Weber Shandwick

Sustainability communication vs. sustainable communications

SUSTAINABILITY COMMUNICATION	SUSTAINABLE COMMUNICATIONS
Sustainability as a content topic ☑ Established practice	**Sustainability as a strategy topic** 📈 New trend

A distinction can be drawn between sustainability communications, i.e., sustainability as a topic and content for corporate communications, and sustainable communications, meaning the sustainability of processes, platforms, media, and products of corporate communications.

methods (e.g., carbon footprints), and more and more labels and certificates (e.g., Blue Angel, ISO 14064) have been established for core functions such as purchasing, production, and distribution. This development is driven by management consultancies, who have identified this as a business field. McKinsey's and Bain's footprint models and standards are prominent examples – they establish new approaches and provide consulting at the same time.

The **ecological impact of the communication department's activities** usually remains unclear, even though there are several reasons why corporate communications should be as sustainable as possible:

▶ **Request for metrics:** The debate on sustainability tends to make everything measurable and controllable. This explains why numerous new certificates, seals, and standards have been developed and introduced in recent years. But the sustainability of corporate communications activities, which are expanding from year to year in today's mediated

world, has rarely been questioned so far. This is curious as events, trade shows, print magazines, yet also websites and social media platforms consume lots of energy and produce waste and air pollution as well. Due to the universality of the trend towards metrics, it can be assumed that communication departments will soon have to answer questions about their own sustainability.

▶ **Agenda-setting by communication agencies:** Practices in consultancies are sometimes seen as indicators of future developments in large organizations. Some pioneers in the communications industry are already certifying and positioning themselves as climate-friendly (e.g., Edelman). This puts the issue on the agenda of the public relations and marketing communications profession. It is only a matter of time before stakeholders as well as internal CSR departments or even top management will start to ask communication leaders about their strategies and achievements in this field.

> » A standard clarifies the path to sustainability. It also allows a professional service firm to differentiate itself from competitors as one that is committed to social and environmental sustainability. «

John Edelman, Managing Director Global Engagement & Corporate Responsibility, Edelman

▶ **Positive effects on sustainability communications:** In addition, acting sustainably in communication departments can have numerous positive effects on communicating about sustainability. Firstly, the integration of sustainability into their own workflow allows communication departments to contribute to related corporate goals. Secondly, dealing with sustainability in their everyday work increases the awareness and expertise of communication practitioners. This helps them to communicate better and more authentically about "green" topics and related issues; they can gain credibility in a difficult stakeholder environment. The bottom line is that those who act sustainably themselves are better equipped to communicate and advise about corporate sustainability.

The way towards a communication footprint

Acknowledging sustainability for communication activities of all kind is just the beginning. John Edelman, Managing Director at Edelman, says the sustainability standard defined by their gobal communications firm is used "to guide our sustainability efforts moving forward and, in the future, we seek to achieve certification. I invite other communications firms to do the same". What is true for agencies might be relevant to communication departments as well. The path will head into the direction of specific certification procedures and seals – towards defining a **communication footprint.**

What such an ecological footprint for corporate communications will look like isn't yet clear. What is clear, however, is that it must reflect the complexity of communication processes, platforms, media, and products. The environmental footprint of corporate communications is influenced by various factors – many of which cannot even be controlled by the department itself (e.g., the energy consumption of office infrastructure). As with other footprint calculations (e.g., Global Footprint Network), these would then have to be broken down per unit, for instance to the communication department or to specific communication activities like a townhall meeting for employees or a site visit for international journalists traveling to attend the opening of a new factory.

Furthermore, there are often contradictions between stakeholder expectations and requirements for environmentally friendly communication. For example, emissions could be saved through virtual events or by not using print products, but this in turn could disappoint key stakeholders preferring to meet in person or use traditional media. Communication leaders should prepare themselves and their teams for questions of this kind.

Getting started today

Even if concepts for defining and measuring communication footprints have yet to be developed, there are already some steps that communication departments

can take today. This helps to make their activities – from running websites, staging events, and producing publications to occupying office space and traveling – more sustainable:

▶ **Put your own sustainability to the test:** As a first step, document all the platforms, media, and products that you use. What sort of events do you organize? What reports and brochures do you publish? In what form do meetings take place, and how much travel is involved? This can reveal potential for improvement. In a second step, by understanding that sustainability plays a part in every decision, it makes sense to include the aspect of sustainability in future decisions and planning templates for projects.

▶ **Develop arguments:** Developing a line of arguments on the sustainability of corporate communications can be an investment in credibility and risk prevention. It can be assumed that internal and external stakeholders such as the management board or journalists will at some point want answers and proof. This needs to be prepared in advance, as many situations will be tricky – for example, if sustainability requirements and user expectations have to be weighed up against each other. In such a case, communicators might need to prepare arguments why the staff magazine can be discontinued, but a customer magazine sent by surface mail to all consumers still makes sense (e.g., because it garners more attention among recipients and provides a good opportunity to verify the address database).

▶ **Reduce where possible:** What processes and activities of a communication department have the most negative impact on the climate, and which of them are most likely to become sustainable? This question can be applied to events such as press conferences, trade fairs and internal events, as well as to communication products like annual reports, image brochures, and employee magazines. These days, much of stakeholder communications – websites, social media channels and intranets – is digital. The same is true for internal workflows and management processes, which are often supported by content management systems, or software for digital assets, collaboration, and video conferencing. All these technologies consume energy. Communication leaders should think early on about sustainability in these dimensions. The good news is that best practices raise awareness internally and externally, and some might even be used to highlight the corporation's overall green commitment in sustainability communications.

READING RECOMMENDATIONS
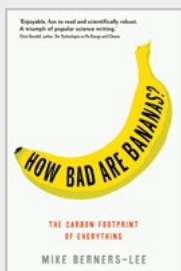
Mike Berners-Lee: How Bad are Bananas? The Carbon Footprint of Everything (2020)
The author, a professor of sustainability at Lancaster University and founder of a company specializing in supply chain carbon metrics, deals with the concept of the carbon footprint in a sound but entertaining way. Using the latest data, the footprint of everything is calculated – including a Zoom call and storing computer data in the cloud. In this way, Berners-Lee provides an initial indication on where CO_2 emissions play a role in corporate communication activities.

DIGITAL NUDGING

Leveraging the potential of designing digital environments

Roots of nudging

The concept of nudging stems from the field of behavioral economics. It was introduced by University of Chicago economist Richard H. Thaler and Harvard Law School professor Cass R. Sunstein (Thaler & Sunstein, 2008). Nudging describes the design of choice environments to predictably influence people's decision-making. Importantly, nudging has a strong ethical component; people should only be nudged towards personally (and socially) beneficial decisions. Moreover, their full freedom of choice must always be preserved.

Nudging assumes that humans aren't simply rational beings (homo oeconomicus) who always take decisions based on weighting the pros and cons in any given situation. Instead, decision-making is influenced by characteristics and limitations of human cognition. For example, biases, heuristics (rules of thumb), and contextual factors, such as cognitive load or fatigue, can lead to decision-making which is suboptimal or inconsistent with one's beliefs. The key idea of nudging is to take these characteristics and limitations of human cognition into account and design a choice environment that helps individuals to take personally (and socially) beneficial decisions.

Nudging in a digital environment

The researchers Weinmann et al. (2016) adapted the concept of nudging to digital environments and coined

> » There is no such thing as 'neutral' design.«

Richard H. Thaler, University of Chicago and Nobel laureate in economic sciences

the term **digital nudging**. Examples of digital environments include a corporate website, a brand channel on social media, an email program, an enterprise social network, an online shop, and a smartphone app. Within digital environments, nudges consist of design elements of the user interface such as the arrangement and display of choice options, the selection and phrasing of information, or the selection of default settings.

When applying digital nudging, user interface design elements are selected to address certain characteristics or limitations of human cognition to **influence decision-making** in a predictable way. For example, as humans have a psychological status quo bias (a preference for maintaining the status quo), selecting an option as a default can nudge people towards choosing this option. Furthermore, individuals tend to prefer the middle option in choice situations because they use the other options as a frame of reference (anchor effect). Thus, by adding a higher and a lower valued option, individuals can be nudged towards selecting the middle option. In the past, digital nudging and similar approaches were primarily applied to e-commerce applications. However, it offers great potential for optimizing any digital choice environment.

Status quo of digital nudging in research

As digital nudging was only introduced relatively recently, research into it is still nascent. There is, however, extensive literature from psychology and behavioral economics on psychological mechanisms in decision-making to inform the design of nudges (e.g., Mirsch et al., 2017). Furthermore, there are theoretical models which describe the process of implementing digital nudging in practice (e.g., the digital nudging process model by Meske & Potthoff, 2017), and research studies proposing digital nudges to improve decision-making in various areas.

Several studies have explored whether and how digital nudging can be applied to **different domains**. For example, nudges have been proposed to support users in protecting personal information on social networking sites by raising awareness of privacy. In an online learning context, digital nudges were suggested to prevent drop-out from online courses by using them to promote a growth mindset, goal setting, and offer personalized assistance. Another example is the use of social norm nudges to encourage the adoption of new communication technologies in the workplace. Thus, while there are several proposed applications and designs of digital nudges, empirical studies evaluating their effect on decision-making in practice remain scarce.

Small but mighty: Why communications departments should explore digital nudging

There are several reasons why digital nudging will be a highly interesting concept for corporate communications in the near future:

▶ **Virtual work:** Due to the digitalization of communications in general and the ongoing COVID-19 pandemic in particular, more work processes have shifted into the virtual sphere. This entails the higher personal responsibility of employees to

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How do humans make decisions?

In economics, humans were long described as economic people (homo oeconomicus) who carefully weighed up different alternatives and made rational decisions to maximize their benefit (left). In practice, however, humans often take suboptimal, irrational decisions. This is explained by the impact of psychological mechanisms on decision-making, such as heuristics (right). Nudging addresses these psychological mechanisms through the careful design of choice environments to help individuals make decisions for their own benefit.

structure their workload and implies more freedom of choice. Accordingly, empowering employees is becoming increasingly important. New communicative approaches to facilitate decision-making are needed. Digital nudging is such an approach which can support communication professionals in leading the way towards effective virtual decision-making by employees throughout the organization while respecting personal autonomy.

▶ **Low costs – high impact:** Economic challenges increase the need to optimize business processes and create low-cost innovations. Digital nudging is a versatile communication technique with high potential impact which can be implemented inexpensively. It provides an opportunity for communication leaders to raise their profile within the company as experts on optimizing digital environments by means of clever communication and design.

▶ **Prize-winning concept:** The underlying concept of nudging isn't just a passing fad or hype but is based on extensive, influential research on human decision-making in psychology and economics. The impact of this research is illustrated by the fact that Richard H. Thaler's work founded the new research domain of behavioral economics, winning him the Nobel prize for economic science in 2017. Thus, digital nudging has a solid scientific foundation and a rich knowledge base that can inform development and implementation in corporate communications.

▶ **Room for exploration:** Although digital nudging itself is a relatively new concept, the body of knowledge is advancing quickly. Its implementation requires translating theory into practice in order to explore promising applications, effective nudge design, and evaluation approaches. The corporate communications profession has not yet discovered the potential of digital nudging. As digital nudges can be implemented and evaluated

relatively easily, communication professionals can interactively explore the field for their purposes.

▶ **The role of communicators:** The successful implementation of digital nudging requires a productive collaboration between different functions and departments within a company, and dialogue with stakeholders. Communication practitioners need to:

1. Identify areas of suboptimal decision-making, for example together with HR, sales & marketing, and IT departments.
2. Understand the interests and characteristics of the stakeholders concerned.
3. Moderate a discussion about ethical concerns, for instance with the staff council.
4. Potentially collaborate with the IT department to implement and evaluate nudges in digital environments.

Communication professionals are well equipped to bridge the gaps between these different groups and communicate the potential benefits and risks of digital nudging. While marketing professionals might have previous experience with the concept in e-commerce and its implementation on commercial websites, the potential of digital nudging is much more far-reaching. Communication professionals can become the primary point of contact for digital nudging in a corporate environment.

Scenarios for digital nudging in corporate communications

Possible applications differ depending on, for example, the available digital choice environments, the influence of communication leaders and professionals on these digital choice environments, and the stakeholders or recipients to be nudged. However, in principle, digital nudging can be applied to any digital choice environment and to any area. In the pharmaceutical industry, Pfizer uses digital nudging to support individuals in health prevention.

IMPLEMENTATION PROCESS OF DIGITAL NUDGING

Analysis	Design	Evaluation
Target group? Target behavior? Psychological mechanisms?	Digital environment Selection of nudges	Impact on behavior? Preserved freedom of choice? Preferences of users?

Based on the digital nudging process model by Meske and Potthoff (2017).

Analysis

▶ Identify target groups (e.g., employees, business partners, or customers).

▶ Determine target behavior taking into consideration the interests and freedom of choice of recipients (e.g., a quick response to an event invitation, employees choosing free training activities, the selection of more secure passwords).

▶ Identify potential reasons for suboptimal behavior (i.e., psychological mechanisms, context factors).

Design

The accumulated information serves as a basis for the second phase in which digital nudges are developed:

▶ Select a suitable digital decision environment (e.g., corporate website, enterprise social network) and analyze its current design; the possibility to customize the design determines how nudges can be implemented.

▶ Develop and implement user interface design elements in the digital choice environment which address the reasons for suboptimal behavior (e.g., different wording, presentation of information, default selection in an online form).

Evaluation

▶ Assess the effect of digital nudges on target behavior. For example, different designs with and without nudge elements are presented to users, and their choices in response to the designs are compared (A/B testing).

▶ Evaluate digital nudges with respect to ethical aspects such as ensuring the freedom of choice, leaving the incentives associated with each choice option unchanged, and respecting the preferences of users.

> » The idea of nudging in prevention can help raise awareness for individual health risks and encourage people to act. In a representative survey, we discovered that most Germans would like to use more preventive services, but either they lack guidance or access is simply too complicated.
>
> This is why we also include elements of nudging in our digital vaccination campaigns, for example by educating patients with a weakened immune system that they are at increased risk of infectious diseases.
>
> In the future, the electronic patient file could be a platform that also utilizes digital nudging with nation-wide impact. For example, an electronic vaccination card could give automatic and individualized recalls to remind users of booster vaccinations. «
>
> *Martin Fensch, Managing Director and Head Health & Value, Pfizer Germany*

Sample applications for digital nudging in communications could include:

▶ **Well-being:** During and after the pandemic, many employees will be working from home and finding it harder and harder to separate work from their private life, as well as having less social interaction with their team. Nudges in internal communications can potentially help employees to improve their well-being by prompting them to schedule downtime in their diaries, reminding co-workers to respect each other's evenings and weekends, encouraging employees to maintain social contact with their colleagues, or simply to get up from their desk occasionally.

▶ **Learning:** Continued learning is important for employees and the company alike, especially as some jobs might disappear or change radically due to the digital transformation and artificial intelligence. However, in day-to-day work, immediate tasks are often prioritized over professional development. The tendency of people to choose a smaller but quicker reward over a larger reward later (i.e., hyperbolic discounting) could be addressed with digital nudges. For example, participation in training activities could be encouraged by emphasizing the long-term benefits of improving skills, knowledge etc. in the choice environment.

▶ **Accepting new technology:** Employees are often faced with new technology in the workplace. Despite its potential benefit for corporate value chains and personal well-being, employees sometimes hesitate to use it or do so ineffectively.

Similar challenges affect other stakeholders like consumers or journalists when new modes of interaction are introduced. Nudges could be used to encourage users to adopt new technology within internal and external innovation communications.

▶ **Interaction and company culture:** New employees starting work remotely in distributed teams may find it hard to bond with co-workers and to learn, adopt, and fit into the company culture. Social norm nudges could help new employees to be familiarized with corporate norms and values. Nudges could also be used to encourage interaction and engagement of new employees, for example by encouraging them to take part in virtual events or sign up for internal newsletters and social platforms. Similar nudges could also be used to encourage external stakeholders to interact and communicate more intensively with the company.

▶ **Cybersecurity:** Cybersecurity is a big challenge for any company in 2021. Research shows that threats are often caused by employees (deliberately or unwittingly) disregarding information security policies (Cram et al., 2020). Employees and managers tend to falsely assess cybersecurity risks based on their personal past experiences. Here, nudges could raise awareness of the prevalence of cybersecurity attacks and the importance of compliant behavior. Specifically, users could be nudged to choose more secure passwords, to be more attentive to potential phishing and spearphishing emails, to share potential security threats with co-workers, and to take better managerial decisions to prepare for cyberattacks.

READING RECOMMENDATIONS
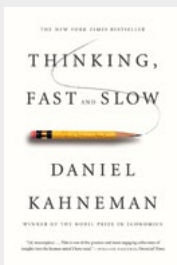
Daniel Kahneman: Thinking, Fast and Slow (2011)
This best-selling book by Nobel laureate Daniel Kahneman explains the functioning of the human mind based on psychological research. He describes two modes of thinking: system 1, which operates automatically, quickly, and with little effort; and system 2, which performs strenuous mental activities, both slow and deliberate. He explains when and how these systems influence our thinking and provides an overview of psychological mechanisms. Understanding these mechanisms forms the basis for addressing them with nudging.
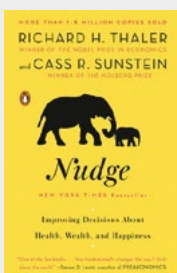
Richard H. Thaler & Cass R. Sunstein: Nudge – Improving Decisions about Health, Wealth, and Happiness (2008)
This best-selling book by economist Richard H. Thaler and legal scholar Cass Sunstein introduces the concept of nudging. The authors discuss the concept of homo oeconomicus, why people sometimes take irrational decisions, and how nudging can help them to make better decisions.

VOICE INTERACTION

Shifting preferences from text to voice

Characteristics of voice interaction

Voice interaction describes the trend towards more interaction between humans and technology using the voice and natural language. Instead of typing, clicking, or swiping on digital devices, the method of input is the voice. Digital systems process these verbal commands, perform an action, and reply to the user by voice and sometimes a graphical user interface (e.g., Siri). Such systems are also called **voice user interfaces (VUIs)**.

The best-known types of VUIs are **personal digital assistants** such as Siri, Google Assistant, and Alexa, which are integrated into smartphones, laptops, or smart speakers. All digital assistants share similar basic features such as answering simple questions, playing music, and creating calendar appointments. Additionally, both Google and Amazon allow **skills or actions** to be installed on their smart speakers which resemble smartphone apps but have been designed for VUI. Often designed by third parties, they extend the capabilities of personal digital assistants.

Furthermore, voice interaction can also be integrated into **Internet of Things (IoT)** devices, including cars, smart home appliances, and TVs. In IoT appliances, voice interaction is often implemented by means of applications provided by one of the major technology companies. For example, Amazon's Alexa can be integrated into Samsung's smart TVs, allowing the user to control the TV remotely by voice. There are also product-specific voice assistants, such as MBUX by Mercedes-Benz, which allows drivers to operate the GPS navigation system and other instruments, and Casey by Bosch.

Voice interaction can also refer to VUIs designed for specific tasks rather than being a personal assistant. A popular example is **voice bots** for call centers which can take calls from customers, manage standardized interactions, and allocate callers to human employees.

Another example is **voice search**, which allows users to search the web through voice commands. Many Android smartphone users are used to saying "Ok, Google" to their smartphone to activate Google search and then verbally stating their search query. Moreover, voice search isn't limited to search engines, but can also be implemented directly on a corporate or brand website to search its content.

In a nutshell, voice interaction is an umbrella term for different forms of VUIs and the general trend

towards more voice-based interactions between humans and technology.

Prevalence and technological basis of voice interaction

Prevalence: A few years ago, Google (2016) already indicated that 20% of global searches were done by voice. A representative survey by the market research company Splendid Research (2019) revealed the following insights about voice interaction:

"Speech is the fundamental means of human communication."

Clifford Nass & Scott Brave, Stanford University

▶ 60% of Germans had already used voice interactions with digital devices, up from 37% in a similar Splendid Research survey in 2017.

▶ One third of respondents said they used voice interaction regularly (daily or several times a week).

▶ Voice interaction was most frequently used to search the internet for information (54%).

▶ The overall trend suggests a steady increase in voice searches, especially on mobile devices. Voice searches via mobile devices are perceived to be more convenient and quicker, and are especially used for searches with a local reference.

Regarding smart speakers, another representative survey by the market research company YouGov found that 24% of Germans own at least one smart speaker (mostly Amazon products) at home, half of this share using them daily. Smart speakers were mainly used for activating streaming services, smart-home operation, asking questions, and everyday organization via related Alexa skills and Google actions (Beyto, 2020).

Technology: The technological basis for voice interaction is natural language processing (NLP). NLP includes both rule-based and data-driven methods from linguistics and artificial intelligence to translate natural language into commands a digital system can "understand." Both approaches have advantages and disadvantages. Rule-based approaches are more reliable (i.e., less nonsensical answers or glitches), but are also very labor-intensive as the rules have to be manually implemented. Therefore, they are best suited to specific tasks with a small range of possible interactions and can't be scaled up to general language understanding. Data-driven approaches, on the other hand, are more scalable, but require very large amounts of data to achieve satisfactory conversational quality. This kind of data and the resources to process it are not widely available. While data-driven approaches have not yet achieved natural language understanding, there are impressive examples like the GPT-3 model by OpenAI, a US-based research and deployment company working on artificial intelligence. The model is based on language data from the entire internet and once wrote an article for the newspaper the Guardian. Given the increase in computing power and data, language models are expected to improve further.

Voice interaction is driven by new communication preferences and maturing technology

Voice interaction is a key trend to watch in 2021 for two reasons:

▶ **Shifting preferences:** A shift from written communication to voice interaction can be observed which will fundamentally change how corporate communications should be designed and evaluated. Communication professionals need to learn how audio content can be made available, how it will be perceived by stakeholders, and how information can be presented by voice.

▶ **Growing maturity:** Voice interaction has been a trending topic for a few years. However, the quality of voice interactions has often been disappointing,

impairing the initial euphoria and limiting possible use cases. Nevertheless, there are several reasons why we expect voice interaction to reach a critical level of maturity within the near future:

- The increasing dissemination of voice interaction devices isn't only a sign of user demand, but also a source of valuable voice interaction data. In combination with the increasing computational power and sophistication of NLP methods, this voice interaction data will be instrumental for improving human language models.

- Voice interaction isn't an isolated trend, but related to other developments such as mixed reality, smart devices, and biometric authentication. Hence, various global players and industries are interested in and working on improving the quality of voice interaction.

- Besides technological factors, legal requirements in the European Union point towards more voice interaction as well. Under the European Accessibility Act, by 2025 companies will have to ensure that their devices and services are accessible to individuals with disabilities, such as impaired vision and hearing.

Three reasons why voice interaction is relevant to corporate communications

❶ Threat and opportunity for corporate visibility

The increase in voice-based searches, for example through Siri or Alexa, might affect the visibility of any company's public communication on search engines. Voice assistants often only return a single result to requests. Therefore, the "race to the top" in search engine ranking, such as appearing in Google's Featured Snippet, is likely to increase.

Furthermore, initial research suggests that typed search queries differ from spoken search queries in several respects. For example, spoken queries tend to be longer, richer, and are phrased as complete questions more often than typed queries (Guy, 2016).

Accordingly, different search engine optimization (SEO) strategies might be required for spoken queries to increase the chances of corporate communications messages and platforms ranking high in the search results. Various marketing blogs and reports propose optimization strategies for voice search such as using an easy-to-understand writing style, including specific local information where possible, using structured data to briefly indicate website content to Google, and ensuring the website loads as quickly as possible.

❷ New requirements and opportunities for content management

To meet the demand for voice interaction and to increase the accessibility of digital content for all users, communication professionals should develop more audio content for existing platforms such as corporate websites. Purely visual and textual content can be complemented by integrating voice search on the website, or by developing more voice assets, such as podcasts. In Germany, the proportion of people listening to podcasts has grown steadily, climbing to 33% in 2020, compared to 26% in 2019 (Krösmann & Klöß, 2020).

Additionally, communication professionals could develop new communication formats for smart speakers. oth Google and Amazon allow third parties to develop services for their smart speakers. For example, the German railway operator Deutsche Bahn offers a service for Amazon Alexa and Google assistants that enables customers to plan journeys by voice. And IT researchers Zhang et al. (2020) have developed a search engine for sounds that allows users to search for content that's difficult to express in words. An

Clubhouse - the first voice based social network

The Clubhouse app is a new type of social network which is entirely based on audio content and voice. In different "rooms", users can have conversations with strangers, colleagues, and friends or listen in on the conversations of others. It was developed by the US company Alpha Exploration Co. and a beta version was released in spring 2020. In order to join the app, one needs an iOS device and an invitation from someone who is already part of it (status as of January 2021). Clubhouse is planned to become available for everyone in the future.

innovation like this might be a starting point for developing playful voice interactions or new strategies for companies' acoustic branding.

All in all, although exploring voice interactions will require communication professionals to acquire new knowledge, they can benefit by profiling themselves as pacesetters within the organization. Voice interactions allows corporate communications to reach out to stakeholders in a new way, and to position the company as an innovative brand.

③ Advanced personalized communication

Voice interaction is predicted to create new opportunities for more personalized corporate communications. This may sound futuristic and perhaps ethically debatable, but a voice can reveal much about a user, including their gender, age, personality, health, physical characteristics, and mood (Kröger et al., 2020). This could be relevant to more targeted customer segmentation and communication. Investing in voice interaction is therefore also an investment in a source of data with enormous potential. Additionally, by considering information such as

the user's past queries, location, shopping history, calendar, and characteristics of their environment (e.g., location, noise), voice user interfaces are predicted to discover more about the context in which communication happens (Telner, 2021). Based on this information, the verbal delivery of content to users might then be automatically adapted.

Risks of voice interaction

Competition: Competing with Amazon and Google in the technology sector is tough. And it's even tougher in the field of voice interaction, with both tech giants dominating the smart speaker market. As well as giving them access to even more personal data, there are also fears that they will use voice interaction devices to lock out other competitors. This could be done by, say, restricting interoperability between their smart speakers and other smart devices (smart fridges, TVs etc.), or by using voice interaction devices to attract users predominantly to their own services.

This risk has been recognized by the European Commission, which started an antitrust competition inquiry into the sector of Internet of Things (IoT) for

consumer-related products and services in the European Union in July 2020. The inquiry is focusing on connected devices (e.g., smart homes, wearables) which can be controlled through voice assistants or mobile devices. A preliminary report is expected in spring 2021, the final report following in summer 2022.

Security: Smart speakers are frequently the subject of privacy and security concerns. For example, smart speakers might respond to a variety of keywords which are similar to their designated wake word, causing them to listen in on private conversations. As the recordings are sent to the cloud for processing and are occasionally transcribed by humans, there is a risk of sensitive information being exposed. Isolated incidents have been reported in the media illustrating potential vulnerabilities, such as a smart speaker sending emails containing intimate conversations, and another one ordering products based on TV commentary. Moreover, smart speaker recordings have been used to investigate crimes. Some people are worried that smart speakers (and other smart devices) could be abused to spy on their owners, as it appears to be already happening in China (Hvistendahl, 2020).

With many employees working from home during and after the Covid-19 pandemic, they may well make business calls in the vicinity of a smart speaker or device. In a recent survey, 23% of smart speaker owners said their smart speaker was positioned in their office at home (Beyto, 2020). This must be seen as a potential security risk.

READING RECOMMENDATIONS
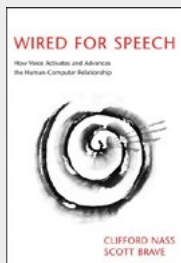
Clifford I. Nass & Scott Brave: Wired for speech: How Voice Activates and Advances the Human-Computer Relationship (2005)

This classic book by Stanford researchers Clifford Nass and Scott Brave explores the effects of human and digital speech on humans. The authors present theories and experiments showing that humans respond to voice technologies in the same way as they respond to real people, behaving as if in a social situation. This raises important questions for the application and design of voice interaction.

Cathy Pearl: Designing Voice User Interfaces (2016)
Cathy Pearl from Google provides the reader with an introduction to the key concepts of voice interaction. The book also includes practical guidance on how to develop and evaluate different types of VUIs.

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DIGGING DEEPER

THREE STUDIES WILL ANALYZE VIRTUAL CORPORATE COMMUNICATIONS AND DIGITAL NUDGING MORE CLOSELY

To find out more about how the identified trends will affect corporate communications, three research projects will be conducted throughout 2021. The findings are set to be published by the end of 2021.

Employee relations and employee engagement in times of virtual collaboration
University of Vienna – Professor Sabine Einwiller

The goal of employee communication is to build up and sustain a trusting relationship between an organization and its employees. It seeks to stimulate employee engagement and build a strong corporate culture. These goals become harder to achieve when leaders and employees mainly work from home – something that has become the "new normal" due to the COVID-19 pandemic. The aims of the research project are to find out …

- ▶ How virtual collaboration affects team spirit and employee engagement
- ▶ How employees are experiencing the new working mode and what their expectations are
- ▶ What employees think of virtual internal communication activities

Virtualizing stakeholder dialogues
Leipzig University – Professor Ansgar Zerfass

Stakeholder dialogues have proven to be a good way for companies to exchange views with relevant stakeholders on critical issues. But what happens when face-to-face meetings can't take place? With regards to key economic challenges such as climate change and sustainability, engaging in stakeholder dialogue is more important than ever.

- ▶ What dimensions and prerequisites need to be considered when virtualizing stakeholder dialogues, especially in connection with sustainability?
- ▶ What processes work best? What other success factors are relevant?
- ▶ What are the limitations for virtual stakeholder dialogues?

Digital nudging
University of Duisburg-Essen – Professor Stefan Stieglitz

Our decisions and actions are always affected by psychological mechanisms and the context in which they are made. Seemingly irrelevant details such as a preselected default option in online forms can influence human decisions far more than expected. The concept of nudging uses these psychological mechanisms to subtly steer human actions into a certain direction for their own benefit without limiting their personal freedom of choice. This idea can also be transferred to the digital world and raise the following questions:

- ▶ How are digital interfaces designed in organizations?
- ▶ To what scenarios can digital nudging be applied – especially in corporate communiations?
- ▶ What ethical, organizational, and technical factors influence the use of digital nudging?

ACADEMIC SOCIETY FOR MANAGEMENT & COMMUNICATION

The Academic Society for Management & Communication is a joint initiative of leading companies and universities. Through collaborative research and knowledge sharing, it aims to actively shape the future of corporate communications. The initiative was founded in 2010, and is currently supported by six professors, four universities, and approximately 40 corporate partners.
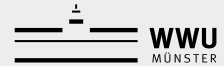
The Academic Society initiates practical, forward-looking research projects. These extensive, multi-disciplinary studies are designed to support the ongoing professionalization of corporate communications. In the past years, more than 20 research projects have been carried out in areas such as agility, automated communication, value creation, digitalization, and diversity.
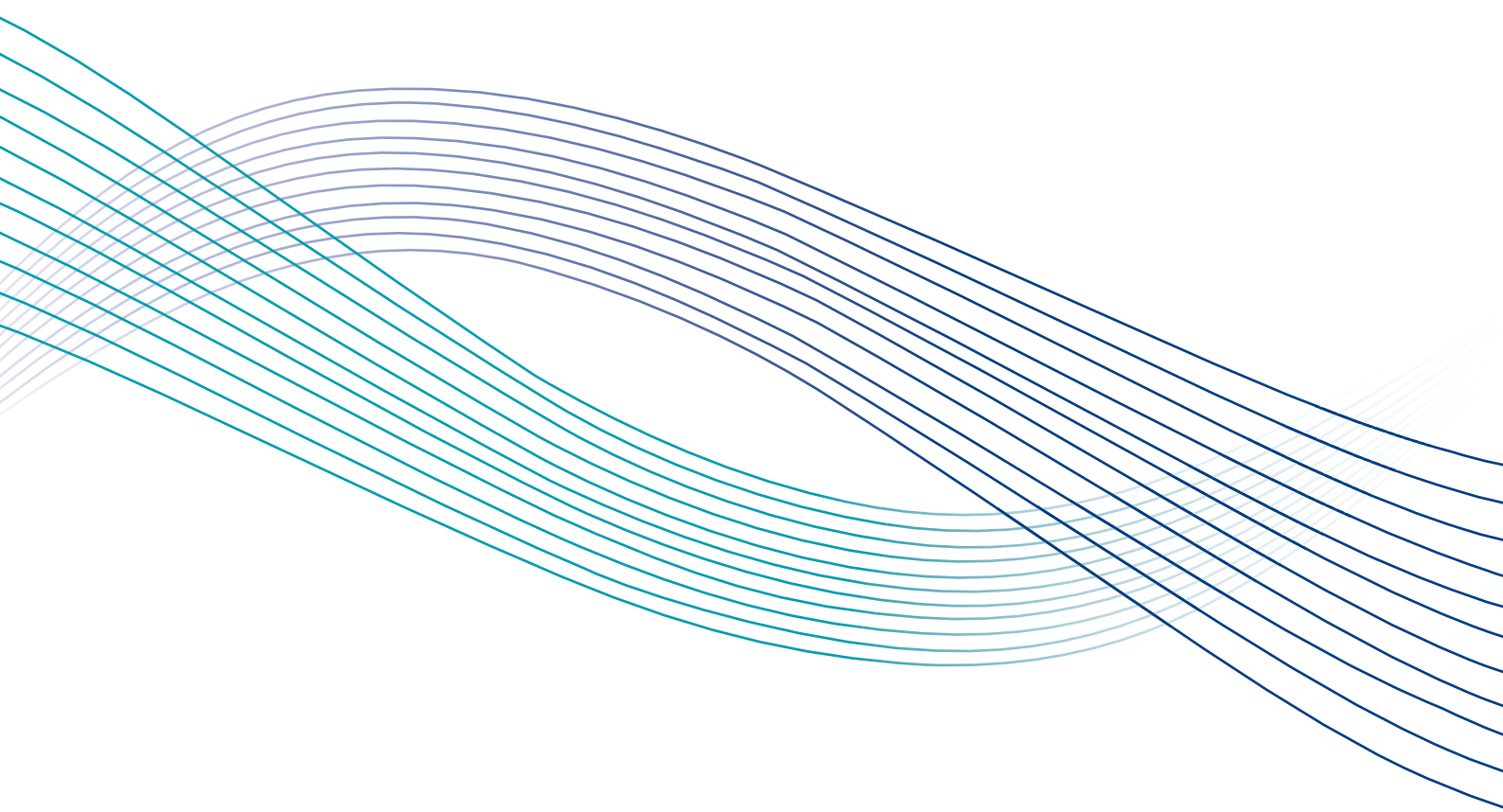
The key findings have been published in the series Communication Insights. All issues feature interviews, case studies and reading recommendations, and can be downloaded by visiting bit.ly/ComInsights.

The Academic Society is part of the Günter Thiele Foundation for Communication & Management, an independent non-profit entity that is dedicated to advancing science and knowledge transfer in the field of corporate communications.

For more information, go to **academic-society.net.**

Our research and corporate partners