#### Original Article

## PR 5.0: A Call for Smart PR Management to Overcome the Digital Trust Crisis

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Abstract - Public Relations (PR) is constantly evolving: within the last 60 years, the concept has developed from the post-war period to the current era of digitization, simultaneously leading to a digital crisis of trust. Against this background, this article introduces a versioning of PR 1.0 to 5.0. The stages of PR are applied to outline smart PR's possibilities and current limits. From today's perspective, the best quality contribution digital PR can make in the crisis of trust is to use outstanding trust technologies beyond its dialogic-co-creative competency. Despite this, the digital age has been characterized as an era of a crisis of trust in brands. Therefore, it is time for the reset of PR. PR 5.0 is a digital trust offensive. With its dialogue and cocreative competencies, the current digital transformation plays into the hands of PR management. Hence, PR is conceptually a good way to support companies in their digital-agile worlds. PR 5.0 can contribute to an increasing corporate internal acceptance of PR.

Keywords - PR 5.0, Smart PR, Digitization, Smartness, Trust.

#### 1. Introduction

Public Relations (PR) is constantly evolving: PR as a communication method is probably as old as humanity. Each society had its communication methods to advance its organisations' interests. The term "public relations" is a communication discipline that quickly became differentiated in Western Europe after the Second World War, following developments in the United States. PR has differentiated itself in many areas of activity, such as internal and external communication, integrated communication, reputation management and brand communication. Within the last 60 years, PR has developed from the post-war period to the current era of digitalization, which is currently characterized by developments such as social media communication or digital trust management.

Today, trust management and PR management are theoretically considered a unit. Despite this so-called process of professionalization of PR management, the internet era is also seen as an era of digital trust crisis. Sometimes, the ongoing age of digitization is characterized as an era of lacking trust.

Against this background, this article introduces a versioning of PR. This lends itself to highlighting methodological shifts, trends, and contextual developments. It is asked what the delineation stages of PR are or could look like. The stages of PR are applied to outline the

possibilities and current limits of smart PR against a rising crisis of trust. Thus, it is asked what smart PR is, which stages it compromises and what potential it holds for regaining digital trust. The applied method is literature reflection.

#### 2. PR: Evolving from PR 1.0 to PR 5.0

A versioning debate is taking place in many areas of society: Starting with the shift from Web 1.0 to Web 2.0 and the transition from the static to the interactive internet, today there is talk of Industry 4.0 (networking of man and machine), Marketing 4.0 (digitalization of marketing) or Society 4.0 (technical and cultural digitalization). The delineation of versions is inconsistent. In part, social changes, understandings, technical innovations or methods and paradigms are responsible for versioning. Although there is extensive PR history research (e.g. Bentele G, 1997; Cutlip, 1995; Hoy et al., 2007; Schmidt, Rennhak, 2020), versioning PR is in contrast to the structures as in marketing, industry or sociology mentioned above a marginal phenomenon (e.g. Aragón, Domingo, 2014; Breakenridge, 2009; Reynolds 2010). However, versioning PR seems fruitful to highlight important developments such as methodological changes and contextual challenges.

#### 2.1. Versioning of PR Management

PR evolves and operates against the backdrop of the critical history of propaganda. A versioning debate as a



historiography of PR has so far been rather unusual. Central reasons for this are probably that the term "PR" is new, but its aims and methods are as old as humanity itself. Moreover, PR has a situational character. PR works best in fair-weather phases such as house and court reporting. In times of crisis, PR mutates into top management crisis communication and crisis marketing (Lies, 2019b).

Although the versioning debate in PR has so far taken place with some restraint, it is nevertheless occurring. In keeping with the times, they are oriented towards the Industry 4.0 ("networking of human and machines") debate and, in addition to digitalisation, emphasize, in particular, PR intelligence. "PR 2.0 emerged through analysis of how the and multimedia were redefining PR (Breakenridge, 2009). Research finds that interactivity is crucial in shaping PR 2.0 (Aragón, Domingo, 2014). Direct interaction with influencers and the relevance of data for PR management is at the forefront of PR 2.0, borrowing from the concept of business intelligence or marketing intelligence. Social media PR's popularity and interactivity requirements are sometimes viewed as a new school of PR. "In some ways, social media denotes the upgrade of public relations. Welcome to PR 2.0." (Reynolds 2010, p. 1) Similar versioning of PR is taking place with the development from Web 1.0 (static internet), Web 2.0 (interactive Web with the growing Social media) to Web 3.0 (semantic Web) (Brown, 2009). Accordingly, PR is also becoming "intelligent" with the semantic Web 3.0. This results, for example, from voicecontrolled services that make language a requirement for brands and thus also for PR. Today, voice services are increasingly based on artificial intelligence.

However, the search for phases is much older than the internet and also occurs in the more recent historical research of PR. Various stages in PR development are found as phases in the history of PR in Germany (Bentele, 1997; Lies, 2019; Lies & Vaih-Baur, 2015; Schmidt & Rennhak, 2020). The following overview shows shifts which characterize the phases of the PR industry:

- PR 1.0 is an initiation era (Schmidt & Rennhak, 2020) and a search for a professional or functional designation (Bentele, 1997) that has not been resolved to date. For example, the professional designation "public relations as relationship management" (Oeckl 1964: 34) as the prototype of PR (post-war debate of PR: 1950 1970). It was prepared by public relations pioneers such as Bernays, who characterised the "public relations" method as an "invisible government" that influences its public through multipliers (Bernays 1928/1955). This particular methodical approach to PR is still valid today.
- PR 2.0 means the differentiation of PR into individual disciplines, such as internal communication, brand,

- online or event communication, from around the 1980's onwards. An example is the changing view of branding, which shifted from the market view to applied PR management: "Public relations gives "legs" and life to brand attitudes and the essential brand promise by telling credible stories (...)." (Mikáčová & Gavlaková, 2014: 839) Here, PR is located as a long-term asset. "Relationships" imply focussing on long-term patterns of interaction." (Smith, 2021)
- PR 3.0 means the professionalization of PR with increasing top management mandates from around the 1990s, e.g. the understanding of PR as relationship and trust management (Ledingham & Bruning, 1998) or reputation management (Hutton et al. 2001). In particular, PR is trust management that aims to develop power and thus social capital as a contribution to corporate success, e.g., with PR as change communications (Lies, 2012). At the same time, criticism of the lack of internal acceptance of PR is increasing. The proportion of PR professionals surveyed who agree that they advise their organizational management/CEO on communicative issues and whose advice is taken into account decreases (2005: 63%: 2018: 47%). At the same time, the proportion of PR professionals who perceive themselves more as the publication organ of their organization is increasing (2005: 25%; 2018: 31%) (Bentele et al. 2018).
- PR 4.0 currently means as in marketing and branding the digitalization of communication and the continuing differentiation with blogger relations and social media communication in focus (today) (Kotler et al. 2021)

The ongoing debate behind versioning concerns the delineation of stages. Are the stages marked by historical social-economical and/or normative-ethical events, requirements, evolving PR methods and/or "new media"? The versioning of PR is made even more complex by the development of focal points of applied communication models with the excellence approach of PR: publicity, information, (as-)symmetric communication (Grunig & Hunt). In view of the popularity of social media, the cocreative model was added (Botan & Taylor, 2005), which implies a person-centred dialogue. The excellence model also assigns temporal priorities which invite their application to versioning of PR. Nevertheless, organisations do not constantly select and apply one model but work situationally (Grunig & Grunig, 2008). Therefore, the stages proposed here are characterised by the formative characteristics of the PR industry, which may situationally apply communications models mentioned.

For all the evolution of PR's fields of action, the fundamentals have not changed - relationship building unites the stages of PR evolvement (see tab. 1)

Table 1. The stages and methodical dimensions of public relations

Model/ Stages	Publicity	Information	Asymmetric communication	Symmetric communication (dialogue)	Co-creative communication
PR 1.0 (-1960 <sup>th</sup> ): Initiation and Career Search PR 2.0 (-1970 <sup>th</sup> ): Individual disciplines PR.3.0 (-1990 <sup>th</sup> ): Professionalization PR 4.0 (ongoing): People- centeredness and digitalization PR 5.0 (Call for): Smart PR	<ul><li>approach</li><li>Methodo</li><li>Methodo</li><li>compan</li></ul>	ical approach: "The h, relationship man ological goals: inte ological action goa ies. ological instrument	nagement grity, trust, power, i ls: voluntary self-co	reputation ommitment of stake	nvisible government), multiplier holders as a power position of unication and behavioural

Source: In a further development of Lies (2019b)

Social media and the importance of reputation and trust ultimately confirm PR management's high relevance. From the perspective of the "old school" of PR 1.0, the evolution to PR 4.0 -management, with its social media and PR-intelligence applications, is a technically driven updating and intensification of the relevance of relationships with stakeholders. This evolvement is complemented by stage 5, which would be necessary to counter the current crisis of trust in society, business and brands, which evolves in the digital age. This development becomes detailed below. For this purpose, the digitization, agilization and trust relevance of PR will first be discussed in the following.

#### 2.2. PR: Digitalization and Digitality

As just mentioned, the evolvement of PR 4.0 is currently leading to digital PR work. "Digitization" initially meant using digital communication tools such as email, social media or mobile media. In addition, social media made it necessary to intensify relationship work. But digitalization continues. Digitalization means the autonomization, flexibilization, and individualization of certain company processes necessitated by digital technologies and innovative business models (Stumpf, 2019). The internal and external PR relevance develops accordingly (e.g. Winkler & Pleil, 2018; Verčič et al., 2015), for example, with platform technologies or the (self-)organization of new digital reference groups and their real-time demands, which lead to a redistribution of power in favor of stakeholders. A technical digitization process also became a cultural requirement (e.g. Bourne, 2022; Santa Soriano & Torres Valdés, 2021; Sheldrake, 2012; Stalder, 2016). These developments are presented in more detail in the following in order to prepare the requirements for PR as an agile competence and digital stakeholder management (e.g. Li et al., 2021; McCorkindale & DiStaso, 2013; van Ruler, 2015; Winkler & Pleil, 2018):

#### 2.2.1. Digitalization - Internal and External Relevance

For about twenty years, digital communication has evolved from a niche topic to a core topic (Winkler & Pleil, 2018). In fact, PR has been in the process of digitalization since about the 1980s, when desktop publishing as digital media production was seen as the first operational digitalization phase. It led to digital studios in the early 1990s. It made the entire print—ready layout of corporate publishing a core competence of PR agencies and, increasingly, of corporate communications departments. Internally, digital business models, processes, and functions are being established that affect PR just as much as project management (Lies, 2019b). At the same time, internal PR supports such transformation processes with change communications. Externally, digitization impacts the media and digitized public (Verčič et al. 2015).

#### 2.2.2. New Media and Platformization

PR management is primarily equated with media relations, new technologies and platformization. This stage is driven by social media platforms, new digital publics and their power through interaction and networking. Digital platforms emerged with the advent of digitization. Platforms are digital infrastructures which integrate and distribute relevant content, thus enabling interaction with groups. Platforms mediate data (Bourne, 2022) and initiate the emergence of digital publics. Social media platforms are currently the most popular example of the platformization of digital PR.

#### 2.2.3. New Dialog Groups as Digital PR Competence

"New school PR" can also mean addressing new dialog groups with the new media: especially with social media, but also with mobile PR. For example, it is becoming increasingly important to identify digital target groups, develop topics and issues, analyse moods, and control digital PR (Santa Soriano & Torres Valdés, 2021). Influencers are the multipliers on the internet who have been competing with traditional journalists since the 2000s. They represent rapidly evolving (and often as rapidly disappearing) "new publics". In this way, there is the possibility of "bringing the public back into public relations" by addressing niche or temporary publics as well (Solis and Breakenridge 2009, p. 31 f.).

#### 2.2.4. Interaction with "Produsers"

With social media newsrooms. management also encounters new media competencies that actually go beyond technical knowledge and lead to digital cultural competence. A new requirement in Web 2.0 is the interaction requirements of Web 2.0 users, which must be met with stakeholder-appropriate content. Social media enabled users to provide information themselves (usergenerated content) and turned the once passive media user into an active content provider. The media user is also a producer ("produser"). This is where the redistribution of power (see below) and digital citizen journalism originated. The citizen journalist of the past is the influencer of today. This is why "the new PR is about people and relationships not new tools" (Solis & Breakenridge 2009, p. 35). PR organizes the sociability of its organizations. Sociability in sociology and psychology refers to establishing and maintaining social relationships, which is the core idea of "public relations".

#### 2.2.5. Real-Time Requirements and Big Data Opportunities

Real-time requirements exist when time and distance become technical possibilities and thus social requirements in marketing and PR, for example. Real-time PR depends on both cultural and instrumental competencies (Sheldrake, 2012). In PR, this real-time (re)action competence with fields of action such as dialogue and crisis communication, executive communication or issues management is nothing new. It is a conceptual requirement for managing dialogue. It is strengthened by the availability of big data and analytical tools that allow PR management to assess the public's online or behavioural patterns, even in real time (Sommerfeld & Yang, 2018). Here, the agile character of PR management is emphasized, whereas a traditional view emphasizes the long-term view of PR.

## 2.2.6. (De-)Convergence of the Media as Digital PR Competence

With the cross-media real-time competence, the convergence of the media becomes clear simultaneously, i.e. the convergence of telecommunications, print, online, TV, radio, mobile and social media shape PR and marketing in

equal measure. The content of all media genres will be or are already available via an end device. The smartphone represents this development and emphasizes the importance of the digital media competencies of (mobile) PR management. Regarding the evolution of the "segment-to-one", a fragmentation and thus a de-convergence of dialogue groups can be observed (Pleil & Sparviero, 2017), which means a shift in public, e.g. driven by mobile publics.

### 2.2.7. Mobile PR and "Segment-to-One" Instead of Mass Media

With the relatively inexpensive bandwidth now available worldwide, including on mobile devices, the new mass media are interactive, not mass communication instruments like the classic PR media or TV. They can create a new (temporary) public and can create an experience of connectivity for them (Galloway, 2009). This public on the move includes commuters, demonstrators, visitors to trade fairs, etc. From a communications point of view, the term "mass media" is just as wrong as it used to be since information is always disseminated on a topic-related basis, often very locally. Moreover, PR has always been mobile through radio. Nevertheless, the opportunity for individual interaction in "segment-to-one" is new.

#### 2.2.8. Redistribution of Power

The media have always been regarded as the fourth branch of power in the (democratic) state, alongside the legislature (legislative power), the executive (executive power) and the judiciary (enforcement power). In part, the role of the media as a fourth power, which controls the other powers, is disputed (Pürer, 2015). It less the media as institutions but as "channels generating meaning", which makes them powerful (Freedman, 2015). Accordingly, the growing importance of search engines as the new gatekeepers of information and (mobile) social media is associated with a redistribution of stakeholder power. To deal with this, digitalised and agile PR skills are needed, aimed at managing digitalised relationships in order to maintain trust.

### 2.2.9. Digitized PR as Integrated (Marketing-)Communication Management

The boundaries of disciplines like PR, marketing and branding are shifting and remain, especially regarding objectives (Gesualdi, 2019), but the methods are becoming interlinked. In particular, "content marketing" is a marketing term, but it means the methodology "PR". In this respect, digitization is driving integrated communication. Overall, the digitization of PR has changed media management with its channel diversity and rapid interaction with journalists and influencers compared to the comparatively slow mass media. In this respect, interactions with influencers have expanded and intensified. "Establishing relationships with key journalists, editors, and bloggers remains unchanged and continues to be one of the most important building blocks of PR strategy" (Brokaw & Siedell 2011, p. 2)

#### 2.2.10. Digitality as the Culture of Digitalization

Public relations as (digital) internal communication shapes corporate cultures and, thus, digitalization (Wuersch et al. 2022). Based on this development, digitality characterizes the effects of technically driven digitalization on society. The concept of digitality has been increasingly discussed since around the 1990's. Gere (2012) uses digitality to describe a digital culture based on digital networks that promotes networking, collaboration, communication, and participation. Stalder (2016) describes an expansion of culture with hybridization and solidification of the digital. She refers to the new possibilities of constituting and linking human and non-human actors.

Real-time demands, mobile communication, and the evolving recipient becoming an interactive and powerful produser leads to digitization being viewed as change and agile management – in companies as a whole and PR departments in particular.

### 2.3 PR: The Digital Transformation as Digital Change Communications

Digital transformation means profound changes for companies but also for PR management itself (Wiencierz & Röttger, 2021). Due to the current digitalization debate around Industry 4.0, the networking of man and machine, artificial intelligence (AI), Big Data and many other buzzwords, as well as the accelerated introduction of "working from home" during the coronavirus pandemic (since around March 2020), corporate digitalization is experiencing a boost. What specialized agencies offer as "change communications" is now being launched by many companies independently if they want to use the potential of internal communications as change communications for their transformation process.

PR Management as an internal executive and employee communication requires a digital media competence encompassing the entire range of internal communication (Bernhard & Russmann, 2023). The prerequisite for this is a corporate culture that, on the one hand, values the use of digital management tools but, on the other hand, views them critically regarding weaknesses (data protection, anonymization of personal relationships, performance-before-reputation priorities). This leads back to digitality and agile management requirements. Besides, this leads forward to PR being viewed as agile project management.

#### 2.4 PR: Agile Project Management

As mentioned above, PR is invested in the long-term, with relationship management and the building of trust and reputation. At the same time, however, PR has an agile component with situational, dialogue, crisis and change competence. PR, as change and agile communication, can contribute to the success of digital transformation (Li et al., 2021).

"Agility" was introduced in the early 1990's. It started as an open process of IT project management. It aims to facilitate acceleration and consider the demands of stakeholders, such as customers or other departments (Zhang & Sharifi, 2000). Today, agility is also discussed beyond the sphere of IT management. "Agile" has become a catch-all term for a range of tools and methods that are more flexible than traditional project management methods. However, agility is not to be confused with actionism. Agility and flexibility are often used synonymously in theory and practice. However, when these terms are differentiated, agility also includes strategy (Prange, 2018). Agility is, therefore, also considered a strategic dynamic capability (Yang &Liu, 2012).

If public relations functions as reputation management, thus ensuring management's scope for action, it must be externally dialogic-interactive and create the conditions with agile management methods (van Ruler, 2015). If, for example, a brand community demanded pandemicappropriate behavior from its company during the Corona crisis, the responses from the PR department would not be sufficient but would require the adaptation of hygiene concepts or other suitable measures (Lies, 2022b). Hence, PR-relevant decisions must be decentralized. Authority and control over budget and technology must be distributed to PR managers. At the same time, they need access to relevant information to make decision-making processes more agile (Wiencierz & Röttger, 2021). Then, it is important for PR management, just like in all other functional management areas, to apply the spectrum of agile methods. These include, for example, Scrum, Kaizen and others, in order to accelerate management and synchronize the demands of markets and stakeholders.

# 2.5 PR: Digital Stakeholder, Issues and Crisis Software Solutions

Before the internet era, PR as relationship management was sometimes an abstract business regarding its impact. PR measurement is a "long and winding road" that is "caught in a deadlock" (Macnamara, 2021, p. 253f.). With the popularity of the internet and particularly social media, followers, shares, likes and posts, and other interaction indicators make it clear on a daily basis where, which topics, and which channels are being driven by which users, influencers, testimonials, journalists, politicians and other multipliers. At the same time, contacts and friends indicate who is networking with whom and to what degree. Stakeholder management, issues management and crisis management can be digitally supported with software in realtime at the push of a button. PR as stakeholder management, from stakeholder identification to PR controlling, can be processed digitally (e.g. McCorkindale & DiStaso, 2013; Kent et al., 2011; Papavasiliou & Gorod, 2022):

#### 2.6. Digital Identification and Evaluation of Stakeholders

Stakeholders appear digitally when they comment positively or negatively on a company, a brand, or products, for example. Posts, shares or likes from social media users or influencers are generally irrelevant as individual cases, so these people only develop relevance for companies when they join together in groups. Stakeholder tools capture this effect by identifying and organizing their contributions. Social media monitoring has become an important digital PR tool for reputation management (McCorkindale & DiStaso, 2013).

#### 2.7. Digital Acceptance Management

Digitalization has also shifted opinion formation to the digital realm (Winkler & Pleil, 2018). This means that media relations work also must be digital to a significant extent.

#### 2.8. Digital Sentiment Analysis

Brands are expected to listen and respond to stakeholder concerns (Freberg, 2019). Social listening has become a new area of PR monitoring. It includes the ability to transform raw conversations into quantitative measures (Rappaport, 2010b). "Data mining techniques can help to accomplish such a goal by extracting or detecting patterns from large databases and predicting customer behaviour." (Fan et al. 2015, p. 29) In order to capture the sentiment towards a company or a brand, constant digital sentiment analysis is fundamentally required. The software can analyse this in real-time by monitoring selected channels, e.g., Facebook, Instagram or Twitter.

### 2.9. Issues Mapping and Crisis Communication Management

In critical cases, warning functions can be activated so that sentiment analyses become crisis warning radars (van der Meer, 2016). This results in a mapping of issues and stakeholders. The software records the issue which most stakeholders are interested in. At the same time, a ranking of the top issues is created. Depending on the company, these can be stable over the years. But they can also emerge and disappear again in a highly dynamic manner, daily, when a brand presents itself interactively in social media with large communities.

#### 2.10. Digital Competitive Analysis

Comparative analyses with topic comparisons about the competition are also possible depending on the requirements. For example, the Share of Voice (SoV) can be compared, i.e., the proportion of shares, likes, posts, etc., about a particular brand compared to selected competitors in specific media. The SoV is important for capturing the competitive context of media presence (Barger & Labrecque, 2013)

#### 2.11. Digital PR Controlling

Compared to the Web 1.0 phase of the Internet (i.e., the transition from static to interactive Internet), digital

communications controlling has thus been radically simplified: Communication controlling and stakeholder management is actually possible without direct target group surveys. Selected core functions are described below in key points. Dashboards of stakeholder management visualize selected metrics in real-time. The dashboard is a visualization approach borrowed from business. Small data boxes or information graphics of key performance indicators (KPIs) are arranged on a single page to display selected and relevant controlling data, e.g., for sentiment analysis in a digital crisis (Kent et al. 2011).

Many software providers support digital PR as a stakeholder, issues and crisis management. Despite the digital update of the PR and the matured change and agile competencies, the digital crisis of trust evolved. In the following, it will be shown that companies essentially fail in the digital application of PR as trust management.

#### 3. PR 5.0 as Digital Trust Management

As already mentioned, at the latest, since PR 3.0, managing trust is a core competency of it. "Trust is typically considered an important antecedent of relationship-building. In addition, it is an important antecedent of image and reputation management." (Valentini, 2021, p. 85). There is no standardized definition of trust. Trust is discussed and analysed in an interdisciplinary way: economics considers trust as a type of "social cement" or "necessary lubricant". Neither the concept of trust itself nor the processes of trust building are standardized. Often, trust is understood as a state, belief or positive expectation. It is relevant for the organisational, institutional and societal level (Valentini, 2021). Another understanding of trust is a relational, multidimensional, and perceptual construct that is subjective and highly volatile. That is why PR and brand management are designed as long-term processes. Trust is, therefore, often understood not as an attribute of individuals but as a property of relationships between at least two people (Preisendörfer, 1995). It becomes a coordination factor in decision-making processes when trustworthy relationships are chosen first as a risk-reducing factor in decision-making processes (Gilbert, 2010). It impacts motivation within PR at internal communication (organizational level). It is relevant for legitimising institutions, e.g. markets or corporations (institutional level).

Besides, trust is understood as a social institution. According to Luhmann, trust is a social construct related to past-related familiarity. For example, it reduces companies' complexity when initiating market transactions (Luhmann, 2012/2014). Trust is a fundamental construct of any transaction in a society. With the popularity of the internet and social media in particular, a new era of "information warfare" has dawned. Despite similar trust factors in online and offline PR (Zheng & Holtmanns, 2013) and a variety of implemented digital trust technologies (Lies, 2019a), as well

as a maturing digital world that is becoming "smarter" (Davenport & Kirby, 2016), digitalization is increasing a "post-truth era". Digitalization has led to a crisis of trust.

### 3.1. Digitization and Digitality as an Environment of (lacking) Trust

Trust is, to some extent, a functional component of digital sovereignty in business, technology, justice, and culture (Friedrichsen & Bisa, 2016). It is considered a central requirement of the network society. Basically, a similar debate about trust can be found in the digital world as well as in the offline world, so that the trust factors of social trust are transferred to digital trust in principle (Zheng & Holtmanns, 2013).

Despite comparable trust-building factors between the offline and online worlds, trust-building with digital PR management has changed: people interact using web-based media, especially notebooks and smartphones, without knowing their transaction partner, and they may interact worldwide. In some cases, interaction is already occurring not only through media but also with media, for example, when digital bots take over individual and group-wide interaction (Riedl, 2021). In terms of information theory, this creates three levels of information: First-hand information is known from the offline world, for example, when customers and salespeople of a brand company interact with each other and can be transferred to the digital world. At the second level, information dissemination occurs as opinion formation through reputation and feedback systems known as word-ofmouth or viral processes. A third level is third-party providers of trust mechanisms such as quality seals or rating agencies, which are also known from the offline world (Daignault et al., 2002). From a trust theory perspective, a lack of personal trust formation, global technical networking and algorithms exacerbate the relevance of the (lack of) trust.

Trust factors are seen in the form of trust signals. They are promoted or hindered by symbols (e.g., quality seals, uniforms) and symptoms (e.g., digital rating portals, customer reviews) (Riegelsberger, 2005). Trust is a multicomplex construct which contributes to digitality. The use of social media platforms such as Facebook is in itself a reputational risk. Central trust carriers can be distinguished in the form of web users (e.g., private individuals, companies, and social media groups) of digital end devices, processes, and networking (Zheng & Holtmanns, 2013).

From a PR perspective, social media are data plantations fed by users themselves with data used to manage public or customer segments (Lies, 2022a). Critically viewed, digital PR as social media communications is part of surveillance capitalism, so social media PR itself poses a reputational risk as an unethical business practice (White & Boatwright, 2020). Moreover, public relations depend on relationships between corporations or their brands and their stakeholders

and not on bots. Thus, automation driven by bots for brand services poses a risk to digital PR management (Galloway & Swiatek, 2018). This indicates some selected challenges for digital trust management, which require both dialogical and digital competencies.

#### 3.2. Digital Trust: The Crisis of Digital Trust Engineering

The digital PR and marketing landscape has established diverse trust-building institutions and processes to enhance trust (Lies, 2019a). Digital quality seals such as Trusted Shops are intended to meet minimum standards with rules such as data security standards. They are supported by further measures such as digital signatures (Wopperer, 2002). Recommendation systems are designed to reduce the complexity of the selection process. They generate personalized predictions about product preferences by filtering consumers' past behaviour and preference statements. However, these very things, synthetic trust mechanisms, invite manipulation. It is estimated that up to one-third of "customer reviews" are fake, leading to artificially generated opinions (Zhuang et al., 2018).

There are incentives to falsify these reviews to promote one's own products or disparage those of competitors. This manipulation represents a growing threat to the trustworthiness of online reviews (Fayazi et al., 2015). The trustworthiness of digital media suffers from data interception, information fraud, privacy spying and other dimensions of trust-damaging behaviour/technologies (Zhang & Gupta, 2018). Moreover, artificial intelligence is a black box. Algorithmic learning methods are inherently nontransparent or explainable (Lockey et al., 2021). Fake news is disinformation, that is, false information spread to deceive (Kshetri & Voas, 2017). "Fake News is created for a variety of reasons; some are purely commercial - for the clicks - and others are highly political - for the propaganda effect." (Hirst, 2017, p. 86) Social media is open and topical. Therefore, creating and spreading misinformation such as rumours, spam, and fake news is easy (Wu et al., 2019). "Fake it till you make it" (Luca & Zervas, 2016). An "influencer industry" has emerged, raising questions regarding its authenticity (Hund, 2023).

Various actors, including state-sponsored ones, use information obtained via social networks as weapons to spread fake news and rumours or generate clickbait as campaigns of targeted manipulation of public opinion on a specific topic - or for or against brands. Actors include digital bots, political organizations as well as corporations, (paid) activists, "true believers" or "useful idiots" (Zannettou et al., 2019). Meanwhile, "crowdturfing" is developing, a counterpart to the possibilities of "crowdsourcing." The term "crowdturfing" derives from "astroturf" campaigns, which are artificially created publics that manipulate search engines and ultimately degrade the quality of online information and threaten the utility of these systems (Lee, 2013).

Accordingly, the development of trust in brands and PR suffers: "Despite the massive expansion of mainly technical and legal control systems in recent years, (...) user trust has not increased at the same rate." (Petrovic et al. 2003, p. 53f.) The digital age is called the "post-truth-era" and is characterised by disintegrating trust (Valentini, 2021). The Havas Group identifies an all-time low in brand trust. Only 47 percent of respondents consider brands trustworthy (Havas Group, 2021). KPMG (2020) also sees a decline in brand trust through the effects of the COVID-19 pandemic, which is centrally driven by personal (in)security. An increasingly cynical consumer, product recalls, or corporate interests being placed above consumer needs or poor services are only selected examples of the drivers of this development (Lantieri & Chiagouris, 2009).

In the last ten years, search engines, traditional media and social media have suffered a loss of trust. Only the owned media have maintained their trust level. "News sources fail to fix their trust problems." (Edelman, 2022, p. 7) A modern crisis of trust in a digital society can be stated (Ryan, 2019). Reputation is also in free fall (van Dyck, 2014).

#### 3.3. Smartness for Autonomous Relationship Management

The trust crisis means a call for smart PR management and the potential for increasing internal acceptance of PR 3.0. When the smartphone is interpreted as a symbol of smart management, "smart" means intelligent, networked, and autonomous management with recourse to digital systems (Tomiyama T. et al. 2019). In this context, Big Data, artificial intelligence, and real-time analytics improve smartness as decision quality by ideally delegating the control of decisions completely to machines (Fleisch, E., Christ, O., & Dierkes, M. 2005). For digitization to lead to smartness, a four-stage process is outlined (Davenport & Kirby, 2016):

#### 3.3.1. Stage 1

The first stage focuses on supporting management in decision-making. Business intelligence and big data analytics are used accordingly by collecting, evaluating, interpreting, and visualizing data to make decisions. Artificial intelligence supports brand management in segmentation, targeting, and brand positioning, for example (Huang & Rust, 2021). Social listening and sentiment analysis are popular examples of this stage. Hence, big data and PR management are designed to become reputation intelligence (McKie & Heath, 2016).

#### 3.3.2. Stage 2

Here, automated decision-making takes place in structured contexts. Within PR, examples for this stage are still rare – and risky for reputation. As already mentioned, relations require human-like interactions, which are not easy

to digitize. Nevertheless, this is already taking place to manage relations within the crisis. Tools can help to understand the evolution of crisis communication and how to manage the flow of communication (van der Meer, 2016). Also, in marketing, examples can be found, for example, with programmatic advertising, which is also relevant for PR regarding brand-appropriate advertising. The research field of brand safety, i.e., the open questions about the brand-appropriate playout of advertising, also shows the early stage of smartness. It is not yet able to recognize the extent to which certain media are brand-appropriate or not. Nevertheless, PR controlling and sentiment analysis are already practiced (Galloway & Swiatek 2018). This is where automated relationship maintenance evolves.

#### 3.3.3. Stage 3

Context awareness and (self-)learning capabilities exist here. Social media mining, for example, enables corporate brand management to recognize the context in real-time in times of online firestorms. Thus, AI also supports crisis communications with automated tools. They are used to identify crises and recommend appropriate organisational responses (Bourne, 2022). Travel providers such as Kayak, for example, currently advertise that their offers will indicate whether the summer holiday will be more expensive or cheaper with price trends for the coming days. Another area of research is data-driven logo design for brand development, which typically evolves as optimized logos (Dew et al. 2021).

#### 3.3.4. Stage 4

This stage is fiction so far. It is characterized by self-awareness and the ability to make independent decisions. Artificial Intelligence and Big Data enable the self-learning synthesis of return-optimizing performance marketing and experience-optimizing customer values. For example, they would have to intervene automatically in production, purchasing or logistics if purpose-oriented brand management envisages the implementation of green brand goals. This would be the precondition for behavioural branding with automatized critical green stakeholder debates within social media. Also, blockchain technologies which decide autonomously to exclude opinion-manipulating bots belong to this stage. These examples mean idealized smart PR to maintain relationships and digital trust.

The current status of smartisation shows that digitization and smartisation are different. The digital trust crisis showcases this. Smartness today depends on both digitized systems and digitality, i.e., a culture that positively influences digitalization and is influenced by it. This emphasizes the contemporary meaning of PR 5.0 for digital relationship management, which applies smart PR technologies.

#### 3.4. PR 5.0: Zero Trust

Digitalization and digitality are increasing the pressure for PR 5.0 to become an era of digital trust management. If trust is an important target dimension of PR, digitalization as a "post-truth" era also means a digital PR management crisis. A reset and remarkable enhancement of digital trust management is required, for which smart PR technologies can serve. Digital trust addresses digital risk across data, cloud, artificial intelligence, data analytics, and risk culture (McKinsey, 2022). Digital trust is based on at least three pillars to revitalize trust within (digital) relationships:

- Digital technologies make companies resilient to cyber attacks, radically reducing the risks of data theft and digital kidnapping.
- Digital technologies that preclude external abuse, such as blockchains.
- Digitality that culturally secures corporate data and IT governance.

One conceptual approach to revitalize trust is the "zero trust architecture": In a zero trust architecture, digitization is treated as hostile. Confidence has to be gained through the authentication, verification and authorization of users, devices and services. "Zero Trust" follows the principle: "Never trust, always verify." (Wylde, 2021, p. 1) Zero trust views identity as the start of the verification process. Trust flows from identity, device state and context (Wylde, 2021). Zero trust is viewed as a reset of digital trust management driven in an era of PR 5.0.

Higher security is seen in decentralized applications, so blockchain technology is widely analysed and discussed as a trusted technology (Boukis, 2019). Blockchain technologies, in practice, provide an opportunity to develop relationships between people personally unknown to each other (Sannikova &Kharitonova, 2019) and establish a tangible strategy to regain trust. Blockchain technologies are currently among the most popular in this regard. Blockchains are sometimes referred to as "trust machines" (Ogilvy, Consulting 2022). Blockchain is based on a peer-to-peer architecture. Data is distributed to all nodes in the network. In this way, information becomes virtually unassailable, as it is no longer in the hands of a single operator but distributed to all participants in the network. At the same time, decentralization ensures the immutability of the blockchain, which is considered tamper-proof. This would be an approach to prevent fake accounts (Freni et al., 2020). Digital rumours in social media are just one development that a blockchain-based trust development counteracts (Chen et al., 2018). Also, brand safety is already an area of research to avoid automated placement in undesirable environments. A blockchain-based notary service for social media would contribute to data integrity (Song et al., 2015). In part, blockchains are conceived as trust repair ("trust

repair theories") as they attempt to compensate for the incentives of illegitimate and illicit digitality. Trust technologies are supposed to regain a trustworthy digital environment (see tab.)

Table 2. Selected contributions of smart PR. Sources

PR field of action		Smart Improvements			
• Data		The secure handling on the part			
protectio	n	of companies with personal data			
Fake acc	ounts	Social media users who post			
Fake nev	vs	content must log into a			
Fake		blockchain. The blockchain can			
relations	hips	track every post (which may be			
	I ···	anonymous for the users)			
<ul> <li>Newslett</li> </ul>	er/	Users register via opt-in for			
Advertisi	ing:	newsletters/advertisements that			
	_	interest them. From then on, they			
		will only receive these			
		advertisements.			
Brand sa	fety	Only certified digital media have			
		access to advertising auction			
		platforms, ensuring a brand-			
		appropriate environment for the			
		automated placement of			
		advertising.			
<ul> <li>Sustainal</li> </ul>	bility	Many brands have the problem			
		that they do not know in detail			
		whether selected suppliers meet			
		sustainability standards. A			
		blockchain with certified and			
		verified suppliers makes it easier			
		for companies and their			
		customers to select and establish			
		sustainably producing supply			
		chains.			
Supply c	hain	The traceability of the supply			
		chain up to and including its			
		sources so that the stakeholders			
		receive verified and non-			
		manipulable information about			
		the origin and processing of a			
		particular product.			

Sources: Cision (2019), Urbach (2020).

# 4. Conclusion: PR 5.0 as a Reset of Digitalized Reputation and Trust Management

This contribution asks (1) what the delineation of PR stages could be and (2) what smart PR is. As mentioned in the introduction, PR is constantly evolving. The phases PR 1.0 to 4.0 have been marked by the impact of characteristics from the PR industry. From today's perspective, the best quality contribution digital PR can make in the crisis of trust is to use outstanding trust technologies beyond its dialogic-co-creative competency. Despite this, the digital age has been characterised as an era of a crisis of trust in brands.

Therefore, it is time for the reset of PR. PR 5.0 means digital relationship management, which applies highly developed smart PR technologies. PR 5.0 is a digital trust offensive. With its dialogue and co-creative competencies, the current digital transformation plays into the hands of PR management. Hence, PR is conceptually a good way to support companies in their digital-agile worlds.

PR 5.0 can contribute to an increasing corporate internal acceptance of PR. It relies on a resilient top management mandate, accompanied by integrated trust management based on digital technologies with the highest security standards. This digital reset phase would bring the PR 5.0 debate back to its starting point: back to protecting the initial requirements of trust and reputation management, bringing inspiration through authentic brands which become used to

operating with agility. Agility is today and has always been an important PR competence if it constantly incorporates stakeholder demands as a dialogic-interactive communication function. At first glance, PR seems to be anything but agile. Neither relationship management nor trust and reputation management are designed for speed or flexibility.

On the contrary, relationship building is closely tied to trust building, which takes time. This first glance is deceptive, however, because the technical real-time potential has led to social real-time expectations and requirements, especially for digital brands. Response times are an indicator of trust. The conversation dynamics are not contradictory but a precondition for sustainable relations. Moreover, the forming of opinions has always been dynamic.

#### References

- [1] Elena Ponti Aragón, and David Domingo, "Developing Public Relations 2.0: Practitioners' Perceptions on the Implementation of Interactive Communication Strategies," *Public Relations Review*, vol. 40, no. 3, pp. 559-561, 2014. [CrossRef] [Google Scholar] [Publisher Link]
- [2] Victor A. Barger, and Lauren Labrecque, "An Integrated Marketing Communications Perspective on Social Media Metrics," International Journal of Integrated Marketing Communications, pp. 1-31, 2013. [Google Scholar] [Publisher Link]
- [3] Bentele G (1997) *PR-Historiographie und funktional-integrative Schichtung. Überlegungen zur PR-Geschichtsschreibung.* In: Szyszka P (ed.). Auf der Suche nach Identität. PR-Geschichte als Theoriebaustein: Serie Öffentlichkeitsarbeit, Public Relations und Kommunikationsmanagement, Bd. 6, Vistas, Berlin, pp. 142–143 [Google Scholar] [Publisher Link]
- [4] G. Bentele et al, "Communication management 2018 Measuring a Profession," *BDKOM kommunikation Verantworten*, 2018. [Google Scholar] [Publisher Link]
- [5] Edward L. Bernays, *Propaganda The Art of Public Relations*, Orange Press, Kempten, pp. 1-158, 1928. [Publisher Link]
- [6] Jana Bernhard, and Uta Russmann, "Digitalization in Public Relations-Changing Competences: A Longitudinal Analysis of Skills Required in PR Job Ads," *Public Relations Review*, vol. 49, no. 1, 2023. [CrossRef] [Google Scholar] [Publisher Link]
- [7] Carl H. Botan, and Maureen Taylor, "Public Relations: State of the Field," *Journal of Communications*, vol. 54, no. 4, pp. 645-661, 2004. [CrossRef] [Google Scholar] [Publisher Link]
- [8] Clea Bourne, *Public Relations and the Digital Professional Discourse and Change*, Springer International Publishing, Palgrave MacMillan, Cham: Switzerland, 2022. [CrossRef] [Google Scholar] [Publisher Link]
- [9] Achilleas Boukis, "Exploring the Implications of Blockchain Technology for Brand-Consumer Relationships: A Future Research Agenda," *Journal of Product and Brand Management*, vol. 29, no. 3, pp. 307-320, 2019. [CrossRef] [Google Scholar] [Publisher Link]
- [10] Deirdre Breakenridge, *PR 2.0: New Media, New Tools, New Audiences*, Pearson Education, pp. 1-304, 2008. [Google Scholar] [Publisher Link]
- [11] Hollie Geitner, Public Relations Debate: Old School or New School, PRSA Pittsburgh, 2017. [Online]. Available: https://prsa-pgh.org/2017/07/10/pr-debate-old-school-vs-new-school-pr/#:~:text=While%20the%20public%20relations%20field,anyone%20working%20in%20public%20relations
- [12] Rob Brown, *Public Relations and the Social Web, How to Use Social Media and Web 2.0 in Communications*, Kogan Page Publishers, pp. 1-192, 2009. [Google Scholar] [Publisher Link]
- [13] Yize Chen, Quanlai Li, and Hao Wang, "Towards Trusted Social Networks with Blockchain Technology," *Social and Information Networks*, pp. 1-6, 2018. [CrossRef] [Google Scholar] [Publisher Link]
- [14] The Blockchain in Communication, Marketing and Advertising Forecasts for the Future, Cision, 2019. [Online]. Available: https://www.cision.de/ressourcen/whitepaper/ebooks/die-blockchain-in-kommunikation-marketing-werbung/
- [15] Scott M. Cutlip, *Public Relations History: From the 17<sup>th</sup> to the 20<sup>th</sup> Century: The Antecedents*, Taylor and Francis, pp. 1-320, 2013. [Google Scholar] [Publisher Link]
- [16] M. Daignault et al., "Enabling Trust Online," *Proceedings Third International Symposium on Electronic Commerce*, pp. 3-12, 2002. [CrossRef] [Google Scholar] [Publisher Link]
- [17] Thomas H. Davenport, and Julia Kirby, "Just How Smart Are Smart Machines?" *MIT Sloan Management Review*, vol. 57, no. 3, pp. 21-25, 2016. [Google Scholar] [Publisher Link]

- [18] Edelman Trust Barometer 2022, Global Report, 2022. [Online]. Available: https://www.edelman.com/sites/g/files/aatuss191/files/2022-01/2022%20Edelman%20Trust%20Barometer%20Global%20Report\_Final.pdf
- [19] Shaokun Fan, Raymond Y.K. Lau, and J. Leon Zhao, "Demystifying Big Data Analytics for Business Intelligence through the Lens of Marketing Mix," *Big Data Research*, vol. 2, no. 1, pp. 28-32, 2015. [CrossRef] [Google Scholar] [Publisher Link]
- [20] Amir Fayazi et al., "Uncovering Crowdsourced Manipulation of Online Reviews," *Proceedings of the 38th International ACM SIGIR Conference on Research and Development in Information Retrieval*, pp. 233-242, 2015. [CrossRef] [Google Scholar] [Publisher Link]
- [21] Elgar Fleisch, Oliver Christ, and Markus Dierke, *The Business Vision of the Internet of Things*, Das Internet der Dinge, Ubiquitous Computing und RFID in der Praxis: Visionen, Technologien, pp. 3-37, 2005. [CrossRef] [Google Scholar] [Publisher Link]
- [22] Freberg K (2019) *Social Media and Emerging Media*. In: Brunner BR (Ed.): Public Relations Theory, Application and Understanding, Wiley, Hoboken, pp. 97-112 [Google Scholar]
- [23] Des Freedman, The Contradictions of Media Power, Bloomsbury Publishing, pp. 1-192, 2015. [Google Scholar] [Publisher Link]
- [24] Pierluigi Freni et al., "Fixing Social Media with the Blockchain," *GoodTechs* '20: Proceedings of the 6<sup>th</sup> EAI International Conference on Smart Objects and Technologies for Social Good, pp. 175-180, 2020. [CrossRef] [Google Scholar] [Publisher Link]
- [25] Mike Friedrichsen, and Peter Bisa, *Introduction Analysis of digital sovereignty on five levels*, Digitale Souveränität: Vertrauen in der Netzwerkgesellschaft, pp. 1-6, 2016. [CrossRef] [Google Scholar] [Publisher Link]
- [26] Chris Galloway, *Mobile Public Relations Strategies*, Encyclopedia of E-Commerce, E-Government, and Mobile Commerce, pp. 240-247, 2009. [CrossRef] [Google Scholar] [Publisher Link]
- [27] Chris Galloway, and Lukasz Swiatek, "Public Relations and Artificial Intelligence: It's Not (Just) About Robots," *Public Relations Review*, vol. 44, no. 5, pp. 734-740, 2018. [CrossRef] [Google Scholar] [Publisher Link]
- [28] Charlie Gere, Community without Community in Digital Culture, Palgrave Macmillan, pp. 1-191, 2012. [Google Scholar] [Publisher Link]
- [29] Maxine Gesualdi, "Revisiting the Relationship between Public Relations and Marketing: Encroachment and Social Media," *Public Relations Review*, vol. 45, no. 2, pp. 372-382, 2019. [CrossRef] [Google Scholar] [Publisher Link]
- [30] Dirk Ulrich Gilbert, Development Lines of Economic Trust Research, KIT Scientific Publishing, 2010. [Google Scholar] [Publisher Link]
- [31] James E. Grunig, and Larissa A. Grunig, *Excellence Theory in Public Relations: Past, Present, and Future*, Public Relations Research: European and International Perspectives and Innovations, pp. 327-347, 2008. [CrossRef] [Google Scholar] [Publisher Link]
- [32] E. Grunig James, and Todd Hunt, Managing Public Relations, Wadsworth/Thomson Learning, 1984. [Google Scholar] [Publisher Link]
- [33] Kirk Hallahan, "Protecting an Organization's Digital Public Relations Assets," *Public Relations Review*, vol. 30, no. 3, pp. 255-268, 2004. [CrossRef] [Google Scholar] [Publisher Link]
- [34] Meaningful Brands Report 2021 finds we are Entering the Age of Cynicism, Havas.com, 2021. [Online]. Available: https://www.havas.com/havas-content/uploads/2021/05/press\_release\_mb21-final.pdf
- [35] Martin Hirst, "Towards a Political Economy of Fake News," *The Political Economy of Communication*, vol. 5, no. 2, pp. 82-94, 2017. [Google Scholar] [Publisher Link]
- [36] Peggy Hoy, Oliver Raaz, and Stefan Wehmeier, "From Facts to Stories or from Stories to Facts? Analyzing Public Relations History in Public Relations Textbooks," *Public Relations Review*, vol. 33, no. 2, pp. 191-200, 2007. [CrossRef] [Google Scholar] [Publisher Link]
- [37] Ming-Hui Huang, and Roland T. Rust, "A Strategic Framework for Artificial Intelligence in Marketing," *Journal of the Academy of Marketing Science*, vol. 49, pp. 30-50, 2021. [CrossRef] [Google Scholar] [Publisher Link]
- [38] Emily Hund, The Influencer Industry, Princeton University Press, pp. 1-232, 2023. [Google Scholar] [Publisher Link]
- [39] Responding to Consumer Trends in the New Reality, COVID-19 Pulse Survey November 2020, KPMG International, 2020. [Online]. Available: https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2020/11/consumers-new-reality.pdf
- [40] James G. Hutton et al., "Reputation Management: The New Face of Corporate Public Relations?," *Public Relations Review*, vol. 27, no. 3, pp. 247-261, 2001. [CrossRef] [Google Scholar] [Publisher Link]
- [41] Kareem Mohamed, and Ümmü Altan Bayraktar, "Artificial Intelligence in Public Relations and Association Rule Mining as a Decision Support Tool," SSRG International Journal of Humanities and Social Science, vol. 9, no. 3, pp. 23-32, 2022. [CrossRef] [Google Scholar] [Publisher Link]
- [42] Michael L. Kent et al., "Learning Web Analytics: A Tool for Strategic Communication, *Public Relations Review*, vol. 37, no. 5, pp. 536-543, 2011. [CrossRef] [Google Scholar] [Publisher Link]
- [43] Philip Kotler, Hermawan Kartajaya, and Iwan Setiawan, *Marketing 5.0 Technology for Humanity*, Wiley Publishers, pp. 1-224, 2021. [Google Scholar] [Publisher Link]
- [44] Nir Kshetri, and Jeffrey Voas, "The Economics of "Fake News," *IEEE IT Professional*, vol. 19, no. 6, pp. 8-12, 2017. [CrossRef] [Google Scholar] [Publisher Link]
- [45] Tara Lantieri, and Larry Chiagouris, "Brand Trust in an Age without Trust: Expert Opinions," *Journal of Consumer Marketing*, vol. 26, no. 2, pp. 78-86, 2009. [CrossRef] [Google Scholar] [Publisher Link]

- [46] John A. Ledingham, and Stephen D. Bruning, "Relationship Management in Public Relations: Dimensions of an Organization-Public Relationship," *Public Relations Review*, vol. 24, no. 1, pp. 55-65, 1998. [CrossRef] [Google Scholar] [Publisher Link]
- [47] Hanjun Lee, JinYoung Han, and Yongmoo Suh, "Gift or Threat? An Examination of Voice of the Customer: The Case of MyStarbucksIdea.com," *Electronic Commerce Research and Applications*, vol. 13, no. 3, pp. 205-219, 2014. [CrossRef] [Google Scholar] [Publisher Link]
- [48] Jo-Yun Li et al., "Employee Coping with Organizational Change in the Face of a Pandemic: The Role of Transparent Internal Communication," *Public Relations Review*, vol. 47, no. 1, 2021. [CrossRef] [Google Scholar] [Publisher Link]
- [49] Steven Lockey et al., "A Review of Trust in Artificial Intelligence: Challenges, Vulnerabilities and Future Directions," *Proceedings of the 54th Hawaii International Conference on System Sciences*, pp. 5463-5472, 2021. [Google Scholar] [Publisher Link]
- [50] Michael Luca, and Georgios Zervas, "Fake it Till You Make it: Reputation, Competition, and Yelp Review fraud," *Management Science*, vol. 62, no. 12, pp. 3412-3427, 2016. [CrossRef] [Google Scholar] [Publisher Link]
- [51] Niklas Luhmann, Trust and Power, Wiley Publishers, pp. 1-224, 2018. [Google Scholar] [Publisher Link]
- [52] Jim Macnamara, *Public relations measurement and evaluation*. In: Valentini C (ed.): Public Relations, vol. 27, Handbooks of Communication Science, Walter de Gruyter, Berlin & Boston, pp. 249-273 . [Google Scholar] [Publisher Link]
- [53] Tina McCorkindale, and Marcia W. Distaso, *The Power of Social Media and its Influence on Corporate Reputation*, The Handbook of Communication and Corporate Reputation, Wiley Blackwell, pp. 40-52, 2013. [CrossRef] [Google Scholar] [Publisher Link]
- [54] David McKie, and Robert L. Heath, "Public Relations as a Strategic Intelligence for the 21st Century: Contexts, Controversies, and Challenges," *Public Relations Review*, vol. 42, no. 2, pp. 298-305, 2016. [CrossRef] [Google Scholar] [Publisher Link]
- [55] Technology Trends Outlook 2022, McKinsey Digital, 2022. [Online]. Available: https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-top-trends-in-tech
- [56] Lenka Mikáčová, and Petra Gavlaková, "The Role of Public Relations in Branding," *Procedia Social and Behavioral Sciences*, vol. 110, pp. 832-840, 2014. [CrossRef] [Google Scholar] [Publisher Link]
- [57] Albert Oeckl, *Public Relations Handbook. Theory and Practice of Public Relations in Germany and the World*, Süddeutscher Verlag, pp. 1-411, 1964. [Google Scholar] [Publisher Link]
- [58] Carla Hendra, Brands, Blockchains and the Creation of Values, Ogilvy, 2022. [Online]. Available: https://www.ogilvy.com/ideas/brands-blockchains-creation-value
- [59] Samantha Papavasiliou, and Alex Gorod, "Stakeholder Management in Digital Transformation: A System of Systems Approach," 17<sup>th</sup>

  Annual System of Systems Engineering Conference (SOSE), pp. 500-505, 2022. [CrossRef] [Google Scholar] [Publisher Link]
- [60] Sergio Sparviero, Corinna Peil, and Gabriele Balbi, *Media Convergence Meets Deconvergence*, Palgrave Macmillan Cham, pp.-3-30, 2017. [CrossRef] [Google Scholar] [Publisher Link]
- [61] Otto Petrovic et al., "Trust in Digital Transactions," Wirtschaftsinformatik, vol. 45, no. 1, pp. 53-66, 2003. [CrossRef] [Google Scholar] [Publisher Link]
- [62] Christiane Prange, "Strategic Management of Agility?," *Controlling and Management Review*, vol. 62, no. 4, pp. 8-17, 2018. [CrossRef] [Google Scholar] [Publisher Link]
- [63] Peter Preisendörfer, "Trust as a Sociological Category Possibilities and Limits of a Decision-Theoretic Foundation of the Trust Concept," *Zeitschrift für Soziologie*, vol. 24, no. 4, pp. 263-272, 1995. [CrossRef] [Google Scholar] [Publisher Link]
- [64] Heinz Pürer, Media in Germany, Press, Radio, Online, UVK Verlagsgesellschaft mbH, pp. 1-256, 2015. [Google Scholar] [Publisher Link]
- [65] Stephen D. Rappaport, "Putting Listening to Work: The Essentials of Listening," *Journal of Advertising Research*, vol. 50, no. 1, pp. 30-41, 2010. [CrossRef] [Google Scholar] [Publisher Link]
- [66] Chris Reynolds, Public Relations (old school) VS. Social Media (The New Way of Communicating with your Audience), Design Beep, 2010. [Online]. Available: https://designbeep.com/2010/04/14/public-relationsold-school-vs-social-mediathe-new-way-of-communicating-with-your-audience/
- [67] René Riedl, *Trust and Digitalization: Review of Behavioral and Neuroscience Evidence*, The Neurobiology of Trust, Cambridge University Press, pp.54-76, 2021. [CrossRef] [Google Scholar] [Publisher Link]
- [68] Jens Riegelsberger, M. Angela Sasse, and John D. McCarthy, "The Mechanics of Trust: A Framework for Research and Design," *International Journal of Human-Computer Studies*, vol. 62, no. 3, pp. 381-422, 2015. [CrossRef] [Google Scholar] [Publisher Link]
- [69] Philippa Ryan, *Trust and Distrust in Digital Economies*, Taylor and Francis Publishers, Routledge, New York, pp. 1-248, 2019. [Google Scholar] [Publisher Link]
- [70] Larisa V. Sannikova, and Yuliya S. Kharitonova, "The Trust and the Digitalization of Society," *Proceeding of the 2<sup>nd</sup> International Conference on Education Science and Social Development (ESSD 2019)*, vol. 298, pp. 505-509, 2019. [CrossRef] [Google Scholar] [Publisher Link]
- [71] Jörn Redler, and Sebastian Ullrich, *Public Relations Cut and Ready*, Springer Gabler, Wiesbaden, 2020. [CrossRef] [Google Scholar] [Publisher Link]

- [72] Alba Santa Soriano, and Rosa María Torres Valdés, "Engaging Universe 4.0: The Case for Forming a Public Relations-Strategic Intelligence Hybrid," *Public Relations Review*, vol. 47, no. 2, pp. 1-12, 2001. [CrossRef] [Google Scholar] [Publisher Link]
- [73] Philip Sheldrake, *Real-Time Public Relations*, Share This: The Social Media Handbook for PR Professionals, Wiley and Sons, pp. 147-155, 2012. [CrossRef] [Google Scholar] [Publisher Link]
- [74] Ronald D. Smith, *Strategic Planning for Public Relations*, Routledge Taylor and Francis Group, New York, 2021. [Google Scholar] [Publisher Link]
- [75] Brian Solis, and Deirdre K. Breakenridge, *Putting the Public Back in Public Relations: How Social Media Is Reinventing the Aging Business of PR*, Pearson Education, pp. 1-352, 2009. [Google Scholar] [Publisher Link]
- [76] Erich J. Sommerfeldt, and Aimei Yang, "Notes on a Dialogue: Twenty Years of Digital Dialogic Communication Research in Public Relations," *Journal of Public Relations Research*, vol. 30, pp. 59-64, 2018. [CrossRef] [Google Scholar] [Publisher Link]
- [77] Gyuwon Song et al., "Blockchain-Based Notarization for Social Media," 2019 IEEE International Conference on Consumer Electronics (ICCE), pp. 1-2, 2019. [CrossRef] [Google Scholar] [Publisher Link]
- [78] Felix Stalder, Culture of Digitality, Suhrkamp Verlag, Berlin, pp. 1-282, 2016. [Google Scholar] [Publisher Link]
- [79] Marcus Stumpf, Digitalization and Communication Consequences of Digital Transformation for Business Communication, Europäische Kulturen in der Wirtschaftskommunikation, 2019. [CrossRef] [Google Scholar] [Publisher Link]
- [80] Tetsuo Tomiyama et al., "Development Capabilities for Smart Products," *CIRP Annals*, vol. 68, no. 2, pp. 727-750, 2019. [CrossRef] [Google Scholar] [Publisher Link]
- [81] Nils Urbach, Marketing in the Age of Digitalization, Opportunities and Challenges Through Digital Innovations, Springer-Verlag, 2020. [CrossRef] [Google Scholar] [Publisher Link]
- [82] Chiara Valentini, "Trust Research in Public Relations: An Assessment of its Conceptual, Theoretical and Methodological Foundations," *Corporate Communications: An International Journal*, vol. 26, no. 1, pp. 84-106, 2021. [CrossRef] [Google Scholar] [Publisher Link]
- [83] Toni G.L.A. van der Meer, "Automated Content Analysis and Crisis Communication Research," *Public Relations Review*, vol. 42, no. 5, pp. 952-961, 2016. [CrossRef] [Google Scholar] [Publisher Link]
- [84] Fons Van Dyck, Advertising Transformed: The New Rules for the Digital Age, Kogan Page, London, pp. 1-200, 2014. [Google Scholar] [Publisher Link]
- [85] Betteke van Ruler, "Agile Public Relations Planning: The Reflective Communication Scrum," *Public Relations Review*, vol. 41, no. 2, pp. 187-194, 2015. [CrossRef] [Google Scholar] [Publisher Link]
- [86] Dejan Verčič, Ana Tkalac Verčič, and Krishnamurthy Sriramesh, "Looking for Digital in Public Relations," *Public Relations Review*, vol. 41, no. 2, pp. 142-152, 2015. [CrossRef] [Google Scholar] [Publisher Link]
- [87] Candace L. White, and Brandon Boatwright, "Social Media Ethics in the Data Economy: Issues of Social Responsibility for using Facebook for Public Relations," *Public Relations Review*, vol. 46, no. 5, 2020. [CrossRef] [Google Scholar] [Publisher Link]
- [88] Christian Wiencierz, and Ulrike Röttger, "The Change Process to Agile Public Relations," *Public Relations Review*, vol. 47, no. 5, 2021. [CrossRef] [Google Scholar] [Publisher Link]
- [89] Peter Winkler, and Thomas Pleil, *Online Public Relations*, Handbuch Online-Kommunikation, pp. 1-27, 2018. [CrossRef] [Google Scholar] [Publisher Link]
- [90] Wolfgang Wopperer, "Fraud Risks in E-commerce Transactions," *The Geneva Papers on Risk and Insurance*, vol. 27, no. 3, pp. 383-394, 2022. [Google Scholar] [Publisher Link]
- [91] Liang Wu et al., "Misinformation in Social Media: Definition, Manipulation, and Detection," *ACM SIGKDD Explorations Newsletter*, vol. 21, no. 2, pp. 80-90, 2019. [CrossRef] [Google Scholar] [Publisher Link]
- [92] Lucia Wuersch, Alain Neher, and Marc K. Peter, "Digital Internal Communication: An Interplay of Socio-Technical Elements," *International Journal of Management Review*, pp. 1-26, 2022. [CrossRef] [Google Scholar] [Publisher Link]
- [93] Allison Wylde, "Zero trust: Never trust, always verify," 2021 International Conference on Cyber Situational Awareness, Data Analytics and Assessment (CyberSA), pp. 1-4, 2021. [CrossRef] [Google Scholar] [Publisher Link]
- [94] Chyan Yang, and Hsian-Ming Liu, "Boosting Firm Performance via Enterprise Agility and Network Structure," *Management Decision*, vol. 50, no. 6, pp. 1022-1044, 2012. [CrossRef] [Google Scholar] [Publisher Link]
- [95] Savvas Zannettou et al., "The Web of False Information: Rumors, Fake News, Hoaxes, Clickbait, and Various Other Shenanigans," *ACM Journal of Data and Information Quality*, vol. 11, no. 3, pp. 1-37, 2019. [CrossRef] [Google Scholar] [Publisher Link]
- [96] Zhiyong Zhang, and Brij B. Gupta, "Social Media Security and Trustworthiness: Overview and New Direction," *Future Generation Computer Systems*, vol. 86, pp. 914-925, 2018. [CrossRef] [Google Scholar] [Publisher Link]
- [97] David Zhengwen Zhang, and Hossein Sharifi, "A Methodology for Achieving Agility in Manufacturing Organisations," *International Journal of Operations and Production Management*, vol. 20, no. 4, pp. 496-513, 2000. [CrossRef] [Google Scholar] [Publisher Link]
- [98] Zheng Yan, and Silke Holtmanns, *Trust Modeling and Management: From Social Trust to Digital Trust*, Computer Security, Privacy and Politics: Current Issues, Challenges and Solutions, pp. 279-303, 2013. [CrossRef] [Google Scholar] [Publisher Link]