Artificial Intelligence's (AI's) implications for strategic communication

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Abstract

Organisations in Africa have integrated Artificial Intelligence's (AI) innovations, such as data driven technologies and automation, into their operations. This is being done, among others, to enhance customer relationships, strategic communication and to deliver services. However, there are suggestions that these data-driven technologies are not transparent enough, which is contrary to what strategic communication is about. A survey in South Africa, for example, shows that only thirty-nine percent of the people have heard of AI. This despite South Africa being in the top five of African countries in the 2020 Global Government Artificial Intelligence Readiness Index.

Several academic papers evaluating the AI topic from different standpoints have been published in recent years. However, little academic work has been done regarding AI's impact on strategic communication in the African continent. Although AI automations and applications seek to address most of society's pressing problems, there are also challenges such as the technicality of AI, ethical issues, and overselling of AI. This conceptual article, analyses documents published on AI, journal articles and books content, identifies and discusses AI challenges, reviews different approaches to AI, examines AI's impact on the strategic communication field and makes recommendations, with an intention to contribute to the AI and strategic communication disciplines. The research established that AI will continue to preoccupy academics and the public because of the increasing intermingling of smart technologies with different areas of human life.

Keywords

Artificial intelligence, South Africa, strategic communication

INTRODUCTION

Strategic communication is a form of communication that helps an organisation achieve its intended goals through interaction at various levels, reputation management, co-creation, collaboration, intentional and persuasive engagement, mitigation of stakeholder conflict, trust building among stakeholders and stakeholder empowerment (Falkheimer & Heide, 2018:71; Hallahan et al., 2007:3; Holtzhausen & Zerfass, 2013:74; Overton-de Klerk & Verwey, 2013:370; Shabangu, 2021:86; Zerfass & Huck, 2007:108; Zerfass et al., 2018:487). Artificial Intelligence's (AI) innovations have greatly impacted strategic communication practice, hence the importance of interdisciplinarity in researching AI (Chetty et al., 2023; Nobre, 2020:4). AI is a branch of science that studies and develops intelligent machines and is a significant component of the fourth industrial revolution that promises to change the way people and organisations communicate, work, and relate to one another (Jaldi, 2023:5). Therefore, strategic communication practitioners and researchers need to pay close attention to the changes brought by AI to remain relevant.

This conceptual article outlines some key developments in AI that have impacted the practice of strategic communication in the South African context (SA), defines the AI concept, discusses approaches to AI, identifies and discusses AI challenges, discusses AI implications for strategic communication and suggests some recommendations for strategic communication practitioners and researchers to consider.

This article is essential, because the impact of AI, particularly on task automation, dialogue, stakeholder engagement and communication campaigns has influenced the field of strategic communication in both negative and positive ways.

In developing this paper, the researcher adopted the documents analysis approach, which included the analysis of documents, journal articles and books published on AI. The sampling of documents was determined by the role each document stood to fulfil in the paper. Analysed documents were sourced from various online platforms, and they contained textual messages and images that have been recorded without any intervention by the researcher. Document analysis is a qualitative research method for rigorously and systematically analysing institutions or organisational documents (Wach, 2013:1). Similarly, Bowen (2009:27) argues that documents analysis can be viewed as a systematic procedure for reviewing the printed and electronic documents of an institution.

DEFINING ARTIFICIAL INTELLIGENCE (AI)

AI is a multifaceted concept used relatively loosely in the media, policymaking environment, and even in academia. AI is a broad concept indicating the general space the world is now working in. From the 1956 Dartmouth conference, AI has been thought of as the artificial reproduction of *human intelligence* (Archer, 2020:190). To examine AI's implication for strategic communication, it is better to begin by giving a definition of the AI concept. Rapid developments in the AI field have precipitated some changes in the definitions over time. More recent definitions integrate phrases such as "imitating intelligent human behaviour". Several AI definitions have come forth, of which most can be classified into four categories (Ertel, 2017:175; Kok et al., 2002:2):

- . systems that think like humans
- . systems that act like humans
- . systems that think rationally, and
- . systems that act rationally.

APPROACHES TO ARTIFICIAL INTELLIGENCE (AI)

AI encompasses approaches that are machine learning and deep learning. Machine learning is a sub-field of AI, while deep learning is understood as a specific type of machine learning (Hu et al, 2019:2; Ertel, 2017:175). Most machine learning approaches use probability to represent the uncertainty that occurs widely in real world problems. Machine learning can be categorised into three types; one is the supervised type, which requires labelled data to train a computational model. Second is the unsupervised machine learning type, which examines unlabelled data to ascertain patterns. Thirdly, is the reinforcement learning type, which requires feedback such as rewards or punishment to assist a computational model to learn (Hu et al, 2019:3). Through machine learning, communicators and advertisers can collect and analyse relevant data from various sources to gain insight into clients' thinking and spending habits (Ferreira, 2021:21). Deep learning, on the other hand, uses a special type of artificial neural network called Deep Neural Networks (DNN) for machine learning tasks (Hu et al, 2019:4).

From the 1950s, AI researchers have been mostly concerned with two parallel approaches. The first is the symbolic approach, which is more about encoding principles of human reasoning and knowledge development which led to expert systems. The second is the Artificial Neural Network approach (ANN), inspired by how the human brain is structured, specifically its neurons (Holmes et al., 2022:17). In describing the ANN, Bakhshi and van Duin (2018:13) state that it can be viewed as processing devices that are loosely modelled after the neural structure of a brain. The ANN approach is one of several data-based approaches, which includes, among others, support vector machines (SVM), Bayesian networks and decision trees (collectively known as Machine Learning) (Holmes et al, 2022:17). Machine learning is at the basis of most AI systems. It is deployed to solve problems that cannot be easily solved by humans, for example, transforming input into output by formulating algorithms. A practical example of this would be separating spam from legitimate emails (Bakhshi & van Duin, 2018:7).

Moreover, Pietikäinen and Silvén (2021:17), also Russel and Norvig (2010:12), suggest that there are

four approaches to AI; namely: the Turing Test, Cognitive Modelling, Laws of Thought and the Rational Agent. The Turing Test approach, which is also known as Acting Humanly, was proposed by Alan Turing in 1950. The approach was designed to provide a satisfactory operational definition of intelligence. According to the Turing Test approach, AI is a study of how to make computers perform tasks that are normally done by human beings (Russel & Norvig, 2010:2).

In the same vein, Boucher (2020:1) suggests that different forms of the Turing test rate machines as intelligent when their actions cannot be differentiated from those of human beings. For computers to be able to perform at a human level, they need to have the following capabilities: Natural Language Processing (NLP) to help it communicate successfully in English; knowledge representation to store what it hears; further, to utilise the stored information to respond to questions and reach conclusions it needs automated reasoning and machine learning to detect patterns and apply them in new contexts (Davenport et al., 2019:3; Pietikäinen & Silvén, 2021:18; Russel & Norvig, 2010:2).

The Cognitive Modelling approach is about automation of activities that would normally be associated with human reasoning – activities like problem solving, learning and decision making (Russel & Norvig, 2010:3). The Laws of Thought approach, also known as Thinking Rationally, refers to the use of computerised models to study mental faculties (Russel & Norvig, 2010:4). Lastly, there is the Rational Agent approach (Acting rationally), where an agent refers to something that acts. The expectation in this approach is that computers, as agents, should be able to operate autonomously, persist over a longer period, adapt to a changing environment, create and pursue goals. A rational agent is therefore the one that acts to achieve the best results, or the best expected result. According to the Rational Agent's approach, AI is concerned with the intelligent conduct of agents (Russel & Norvig, 2010:2). All computer capabilities listed under the Turing Test approach would allow an agent to become rational (Russel & Norvig, 2010:4).

According to Saghiri et al. (2022:1), the evolution of AI-based systems starts with Artificial Narrow Intelligence (ANI), then continues to Artificial General Intelligence (AGI), and lastly the Artificial Super Intelligence (ASI), which will surpass human capabilities in all dimensions. The ANI type of intelligence refers to intelligent systems that do specific tasks, for example, an agent with capabilities such as face recognition, games playing and fingerprint detection. These agents are programmed to do tasks and cannot detect and formulate tasks that are unknown to them. Meanwhile, most researchers use AGI for those agents whose intelligence is equivalent to human agents. Three types of ASI have been identified, namely: Speed ASI, collective ASI, and quality ASI. Speed ASI refers to an agent faster than a human, collective ASI refers to decision-making capabilities similar to a group of humans, and quality ASI refers to an agent that can do work that humans cannot (Saghiri et al., 2022:2).

ARTIFICIAL INTELLIGENCE (AI) IN SOUTH AFRICA

Most scientific publications on AI are mainly coming from Canada, China, Europe, Japan and the United States of America; Africa is still far behind and this limits innovation opportunities in the field (Sedola et al., 2021:22). Hassan (2023:1429) agrees that most of the AI literature is biased toward Euro-American perspectives and lack the understanding of how AI development is apprehended in the Global South, particularly in Africa. Notwithstanding, a variety of AI systems are being developed and deployed in a creative and transformative way around the African continent. Through machine learning innovations, for instance, African innovators are continuously improving in ways of knowledge production and solving societal challenges (Massiceti & Mohamed, 2018:4). South Africa is well ahead in the continent in AI adoption with a vigorous ecosystem. It is estimated that more than one hundred (100) companies in South Africa are either integrating AI solutions into their operations or are developing new AI-based solutions (Jaldi, 2023:6). Universities and research institutions remain a springboard for AI ecosystems around the world. Researchers, academic writers, and engineers mostly get their head start from universities and research institutions and develop more innovative ideas (Schoeman et al., 2021:13). South Africa is not different from the rest of the world in this regard.

In SA, this trend has been followed by the establishment of AI research-based institutions such as Lelapa, the Deep Learning Indaba, the Artificial Intelligence Institute of Southern Africa, the Centre for

Artificial Intelligence Research, and the Centre for the Fourth Industrial Revolution-South Africa.

Lelapa.AI is a socially embedded Africa-centric AI research and product lab. It is grounded in the African philosophy of Ubuntu, with its mission to use AI to address social and economic challenges in Africa. It accomplishes that by providing artificial intelligence solutions for businesses and organisations in the continent (lelapa.AI).

The Deep Learning Indaba is a grassroots AI organisation founded in South Africa in 2016 (Van Tilburg, 2023:2). The Deep Learning Indaba convenes annual meetings of the African machine learning and AI community. The Deep Learning Indaba is intended to strengthen artificial intelligence in Africa. The Indaba seeks to achieve its goal of creating leadership through the IndabaX programme; Kambule and Maathai awards to demonstrate recognition of excellence in AI research and innovation and use the actual Deep Learning Indaba for community building (Mohamed et al., 2019:4). In 2018 the Deep Learning Indaba hosted Africa's AI researchers and innovators from 35 countries across the continent. This demonstrates that a community of AI researchers and innovators already exists on the continent (Mohamed et al., 2019:4).

Moreover, the President of South Africa has established a commission on the Fourth Industrial Revolution (4IR). The commission's main responsibility includes proposing the country's super strategy for the Fourth Industrial Revolution (Government Gazette, 2020:10). Following the commission's establishment, the Department of Communications and Digital Technologies, the University of Johannesburg and the Tshwane University of Technology collaborated to create the Artificial Intelligence Institute of South Africa. The Institute has been launched to position SA as a competitive player in the field of Artificial Intelligence (AII-SA). According to the OECD/CAF (2022:3), AI can be used by governments to design progressive policies, enhance communication and engagement with citizens, take better and more targeted decisions, and improve the speed and quality of public services (OECD/CAF, 2022:3).

In addition to the President's commission, in 2011 the Centre for Artificial Intelligence Research (CAIR) which is a distributed South African research network was established. It is virtually hosted and coordinated by the Council for Scientific and Industrial Research (CSIR). The main aim of its establishment is to build world class Artificial Intelligence research capacity in South Africa. The CAIR comprises nine established research groups across eight universities. The groups are AI for Development, Foundations of Machine Learning, Applications of Machine Learning, AI and Cybersecurity, Computational Logic, Adaptive and Cognitive Systems, Ethics of AI, Knowledge Representation and Reasoning, and Probabilistic Modelling. The CAIR conducts foundational, directed, and applied research into various aspects of AI through these groups. The centre is funded primarily by the Department of Science and Innovation (https://www.cair.org.za/about).

Lastly, the Minister of Science and Innovation announced the new Centre for the Fourth Industrial Revolution South Africa in 2019. The centre is aimed at driving the adoption and responsible deployment of emerging technologies in South Africa. The centre is an affiliate of the World Economic Forum's global network of centres for the Fourth Industrial Revolution, which are aimed at fostering collaboration and dialogue on the ethical and responsible deployment of emerging technologies (Gwagwa et al., 2020:13; https://c4ir.co.za/about-c4ir-sa/).

AI IMPLICATIONS FOR STRATEGIC COMMUNICATION

Reflecting on the latest strategic communication developments, Overton-de Klerk (2023:7) highlighted some key shifts in the field. One is that a postmodern paradigm has replaced hierarchies and facilitates the development of new structures informed by dialogue-based communication. Consequently, communication has moved from top-down to multidirectional, dialectical to diagonal and from predictable to ambiguous. Secondly, the responsibilities of a manager have changed to that of a facilitator who creates organisation-stakeholders participation and discourse platforms (Overton-de Klerk, 2023:6). Moreover, Benecke and Phumo (2021) postulate that metamodernism offers an alternative paradigmatic lens through which to understand and examine strategic communication practices. In this case metamodernism is viewed as the 'both-and' approach or ontological fluctuation between modernism and postmodernism,

based on the contextual demands of the communicative action, the metamodern approach negotiates appropriate practices.

Benecke & Phumo (2021) further argue that strategic communication has been thrown into a new reality that it is ill-prepared for, namely the influence of technology. Similarly, the 2019 Global Communications Report revealed that about 40% of public relations or strategic communication practitioners are not knowledgeable about the potential of AI in communications, while another 46% are only somewhat aware of the impact of AI on communication (Global Communications Report, 2019:29). AI has a direct influence in not only the strategic communication field, but also on the way society lives, conducts business, and arranges social dynamics. Technology influence is also seen in the way society uses mobile devices for communication and participating on social media (Kushchu & Demirel, 2020:6). Similarly, Bakhshi and van Duin (2018:17) observe that most industries are witnessing a significant change in functioning because of the adoption of AI in work processes and systems. The increased accuracy, availability, and ease of implementation of AI systems creates opportunities for organisations to integrate AI into their operations. This integration is embarked upon to minimise costs, enhance customer experiences, better operational processes, improve stakeholder collaboration, and to help achieve set goals (Mingotto et al., 2020:493). All these innovative operations supported by the AI impacts directly on strategic communication practice and research approaches.

This has been observed in both public and private sector organisations in South Africa, as discussed under the subheadings to follow. According to Kaczmarek-Śliwińska, 2019:66; Liew, 2021:26 and Panda et al., 2019:2, some AI-based innovations that impact the strategic communication field include the following: The creation of typical information of a repetitive nature, which can be defined as predictable (e.g. activities of spokespeople); delivering standard information packages in a short period of time (e.g. communication with customers/stakeholders). Further, AI makes it possible to verify perceptions (stakeholder/customer surveys); AI helps to customise messages to meet the needs of a specific stakeholder group. AI can also perform basic media relations functions such as press releases, and allows strategic communicators to save time in order to spend it on advancing relations with journalists. AI can manage internal communication within an organisation. AI can further provide a real-time synthesis of data from multiple sources (such as traditional media, news websites, social media) and determine potential crises as well as attitudes from these media; AI is able to maintain stakeholder relations and increase brand loyalty through lead nurturing, and fulfil a basic conversational role through chatbots. Chetty et al. (2023) concur that AI-driven innovations, such as ChatGPT, are becoming increasingly adept at performing tasks that have traditionally been reserved for human workers.

Strategic communication practitioners have now embraced some elements of AI and this is having a significant impact on the field. The re-emergence of AI is demonstrating that computers and machines can perform duties that were known to require human intelligence. Strategic communication is one of the fields that is on the threshold of the AI revolution; through strategic communication, organisations segment messages for different stakeholders at the appropriate time (Kaczmarek-Śliwińska, 2019:67). With the application of AI technologies, organisations can measure strategic communication efforts and work towards alignment of organisational goals. AI has the potential to automate and perform various strategic communication activities in an organisation. These activities include, among others, developing data-driven content, aiding in crisis management, engaging in stakeholder dialogue, customer service, organising and updating media lists, converting, and transcribing audio into text, and monitoring and managing social media (Panda et al., 2019:1).

Although the adoption of AI in the field of strategic communication has not become a standard yet in South Africa, the interest in embracing AI is, however, growing. The following subsections focus on some key strategic communication functions that have been impacted by the emergence and application of AI innovations.

AI in communication campaigns

Global amelioration of computer usage and access to big data have contributed to the progress made in AI since 2010. This has led to the convergence of AI and strategic communication, leading to new ways to optimise communication campaigns (Nobre, 2020:5; Samek et al., 2018:56). The routine work of strategic communication practitioners would normally include, among others, the drafting of communication campaign strategies and campaign plans, writing and distributing press releases and handling public relations crises. Working with multiple stakeholders' data regularly takes a lot of time of these practitioners. AI has altered aspects of these practitioners' work and relations between stakeholders within the public relations industry (Nobre, 2020:4; Panda et al., 2019:2). AI is bringing changes to the routine tasks, systems, management, and workflow in the strategic communication practitioners' space. Moreover, AI's ability to process human language (also known as *natural language processing*) has allowed organisations to understand individual behaviours, preferences, beliefs, and interests, enabling them to deliver more efficient communication campaigns (Ardila, 2020:16).

Strategic communication practitioners planning a campaign can now take decisions informed by scientific data and insights originating from AI-powered computer algorithms (Samek et al., 2018:51). In a short space of time, by means of algorithms, communication practitioners can scan social media and other data sources they would need to effectuate a campaign. Algorithms can provide useful data in making decisions relating to starting a communication campaign, relevant content, channels, and audience targeting (Panda et al., 2019:6).

The OMO Mobile Loyalty Program campaign is one typical case study of an AI-powered communication campaign. The OMO digital campaign involved engaging mothers and driving customer loyalty in an environment where price determines the traffic. To maximise its client reach, OMO turned to the mobile phone to deliver custom messages from their brand ambassador. This was done through easy-to-use voicemail technology. While only sixteen percent (16%) of consumers in South Africa own a smartphone, seventy-five (75%) percent use Short Message Service (SMS) and Unstructured Supplementary Service Data regularly. OMO increased brand engagement by going beyond a simple text to sending out a mobile campaign to reach mothers. The SMS opt-in consumers received automated special messages, offers, surveys and other news via SMS. In this way consumers and potential consumers were identified, hence an ongoing communication with the brand. The Mobile Loyalty Program campaign is now an ongoing priority for the OMO brand. Data reveals a significant increase in the volume of loyal OMO-household spending (OMO Mobile Loyalty Program: 2012).

AI-powered communication campaigns are not only employed in corporate communication campaigns, but have become increasingly significant in political communication campaigns. A variety of AI methods are used to track online activities, including the monitoring of political candidates and political parties' websites during elections and the thematic analysis of press, blogger and academic accounts of digital campaigns (Williamson et al., 2010:2). The Democratic Alliance, for instance, earned praise for its use of social media in the local government elections (Britten, 2011). AI communication campaigns are being used by political parties, candidates, and citizens to raise awareness and garner support (Williamson et al., 2010:iii). AI adoption in social media amplifies political campaigns and the messages of political candidates. Through AI-powered algorithms, social media platforms enable four digital communication campaign techniques. One is electorate micro-targeting, personalisation, direct interaction, and sustained engagements (Uwem, 2022:41).

AI in stakeholder engagement

Strategic communication practitioners' role, among other tasks, is to engage stakeholders on behalf of an organisation. AI systems have demonstrated that machines are slowly taking charge of this function. This is done through several AI applications; to date thirty-seven (37) chatbot start-ups have been established in South Africa. These start-ups are providing not only strategic communication functions, but different services to both private and public sector organisations (https://tracxn.com/explore/Chatbots-Startups-in-South-Africa). The Botlhale AI Solutions, for example, is a research and innovation start-up that

specialises in conversational AI. Conversational AI refers to the use of messaging applications, speech-based assistants and chatbots to automate communication and generate a personalised citizen's experience of services (Microsoft, 2022:23).

As there is normally a huge number of queries in big organisations, the use of conversational AI becomes useful in reducing query resolution time and queries can be solved effectively (Microsoft, 2022:23). Therefore, Botlhale provides AI services that help big organisations such as government entities to engage with communities and service the public effectively, using nine African languages spoken in South Africa (https://botlhale.ai/about-us/). Such a start-up is essential because, according to the Access Partnership (2018:11), citizens' experience of public services can often be a challenging exercise in many African countries. Provision of services is mostly characterised by lack of accuracy, slow response time, and generally poor quality, resulting in low satisfaction levels in the communities.

In addition to the Botlhale AI Solutions, is the GotBot AI. The GotBot AI uses artificial intelligence to help enterprises manage their customer interactions, this by automating day-to-day tasks (https://www.gotbot.co.za/case-studies). Interaction such as giving feedback to clients' enquiries is now automated, a machine handles such a task. Similarly, the Hi.Guru is an AI company that creates a business conversation hub, connecting clients' business to their customers, employees, and processes through smart instant messaging (https://www.hi.guru/about/).

One interesting Conversational AI case study was the bringing of AI-supported change in a financial services environment, the case of BDO. The company Binder Dijker Otte (BDO) faced the challenge of transforming the way audits are run and improving the collaboration and exchange of data between clients and auditors in a way that provides a competitive edge in the market. In response, the Conversational AI solution introduced a personalised conversational interface that integrates webchat within the organisation's auditing tool. The solution facilitated the roll-out of Multi-lingual National Language Processing and Machine learning to support questions within the Microsoft Question & Answer page. Lastly, it introduced automatic AI Data Classification to highlight anomalies and recommend outcomes. Now a Conversational AI solution enables BDO to provide innovative and automated support for its clients in a highly regulated environment (OpenDialog, 2022:9; https://www.bdo.mu/en-gb/about/bdo-in-mauritius/bdo-history).

AI automating processes

Digitisation and automation of the communication function is indeed unavoidable in the 21st century; the disruptive nature of AI technologies have impacted stakeholders' experience of organisational communication. Organisational process automation involves AI's applications that are standardised in such a way that they require imposition of logic and consistency (Davenport et al., 2019:4). The Gauteng Department of Education in South Africa, for example, developed the Online Admissions Application system which applies standardised rules and algorithms to advance what officials would do over a longer period (OECD, 2022). Prior to the development of the Online Admissions Application system, learners' parents were required to apply for their children's admission to schools by physically moving from one school to the other, seeking placement. This practice sometimes included parents having to wait in long queues before they could be assisted (OECD, 2022). This innovation has not only impacted the department's leaner enrolment process but has also enhanced the way the department interacts with parents as key stakeholders.

Another AI case study is that of the Rethabile Clinic in Polokwane. The pilot AI project was rolled out by the Mint Group and the Limpopo Department of Health (DoH). The purpose of the project was to establish the viability of healthcare, with AI enabling improved patient care.

It started in November 2018 and concluded in April 2019. It involved monitoring and managing 25 000 patients per month. Upon completion the following, among others, had been achieved: increased efficiency and communication from clinic staff; electronic record-keeping of patient information; attendance and performance tracking of healthcare staff, appointment management and reduced lag times (https://za.mintgroup.net/resources/case-studies/ai-pilot-results-at-limpopo-clinic-case-study/).

The main aim of process automation is to streamline processes and eliminate inefficiencies in an organisation. Process automation is an essential element of business process management (BPM), which is also referred to as business process automation (BPA). An increase in automation preference by organisations equates to increased competitiveness in the job market. Most employees, more than before, would now need to develop an understanding of AI approaches (Ferreira, 2021:31).

AI in dialogue

A postmodern paradigm in strategic communication promotes communication that is based on dialogue. Communication has thus moved from dialectical to dialogical, from fixed to emerging, from top-down to multidirectional, and from predictable to ambiguous within the chaotic contexts in which it operates (Overton-de Klerk, 2023:6). The theory and research on dialogue can be traced to Martin Buber's seminal text *I and Thou* in 1923. According to Buber, human interaction should be guided by human kindness, not by manipulation. Martin Buber regarded presentness and acknowledgement of others as a prerequisite to dialogue (Kent & Lane, 2017:569; Sommerfeldt & Yang, 2018:60). Kaptein and Van Tulder (2003:227) explicate that dialogue is a mechanism for stakeholder involvement in decision-making processes and a collaborative means of resolving organisational conflicts. In the same vein, Uysal (2018:101) emphasises that the concept of dialogue focuses on genuine and meaningful interactions between stakeholders and organisations.

The critical assumptions of dialogue are *mutuality*, which refers to the recognition of organisation stakeholder relationships. Secondly, *propinquity*, which refers to temporality and spontaneity of dialogue with stakeholders. Thirdly, it is *empathy*, which means supportiveness and confirmation of stakeholders' goals and interests. Fourthly is *risks*, referring to the willingness to interact with individuals and stakeholders on their own terms. Lastly is *commitment*, which refers to the extent to which an organisation allows space for dialogue (Uysal, 2018:101).

Part of AI is a computer program called Virtual Agent. Virtual agent is designed to engage with humans in the form of a chatbot that would normally appear on organisations' websites. Chatbots are designed, with the help of machine learning, to give a specific and customised response to stakeholders' questions. Organisational functions that would normally require a human, such as client contact, are now performed by virtual agents (Dutta et al., 2022:5; Microsoft, 2022:21). AI's application, virtual agents for example, may not be a replacement for strategic communication professionals, but its role in interacting with stakeholders directly impacts traditional dialogue as explained here.

The emergence of social media has also augmented organisations' dialogue initiatives with stakeholders. AI-powered tools are aiding in finding, scheduling, managing, and reporting on social media content more feasible for strategic communication professionals. AI with its self-learning capabilities offers strategic communication professionals a tool, not only to harness insights from the massive social media data, but also a system to respond autonomously to tweets, queries, grievances, posts and other messages on the social media. Various social media platforms are using AI to customise and personalise newsfeeds and posts. Moreover, major e-retailers are using AI to send offers to the users, based on their social media and internet browsing behaviours (Panda et al., 2019:6). Social media and other AI innovations have created several opportunities; however, challenges associated with the technology remain.

Despite the successful integration of AI approaches in various strategic communication applications, there are still challenges and questions that need to be addressed (Samek et al., 2018:49). The following section expands on some of these challenges.

AI CHALLENGES

The information age is a complex ecosystem of big data technologies, mediums, private and public actors. The massive digitisation allows access to information and its dissemination to be performed mostly through AI-driven means of communication. As much as AI's potential is vast, so are the consequences of its unintended uses, especially with an uncertain future we are all facing now (Kushchu & Demirel,

2020:58). There are serious expectations from the AI technology, but there are also complex technical challenges and ethical issues that are directly impacting strategic communication and seem to be unsurmountable. Davenport et al. (2019:8) and Pietikäinen & Silvén (2021:14), for example, state that although chatbots can be more effective in engaging customers and stakeholders, research shows that if it is disclosed to customers that they are engaging with chatbots, they tend to be less responsive. Customers assume that AI chatbots are less empathetic and as a result customers participate less in engagements (Davenport et al., 2019:8).

Moreover, lack of transparency and accountability in the AI field can be identified as one key challenge directly impacting strategic communication; this is becoming more visible as AI systems are intensively rolled out (Gwagwa et al., 2020:3; Kushchu & Demirel, 2020:59). T*he Global Disinformation Order 2019: Global Inventory of Organised Social Media Manipulation* report by Bradshaw and Howard, (2019:2), for instance, states that AI is increasingly used for organised manipulation of public opinion. Some countries today groom special cyber-forces that actively utilise social networks to influence public opinion in certain countries. This could mean that there is a danger that AI creates new opportunities for fierce information-wars and emotional infection.

The literature has demonstrated that AI-powered innovations have the potential to address many of humanity's pressing challenges through, for example, instilling the use of conversational AI, facilitating stakeholder engagement, automating services, improving collaboration, and providing better education. However, this comes with risks of entrenched and worsening social inequality, especially in communities such as South Africa, where access to data is still very expensive for ordinary members of the society. (Hagerty & Rubinov, 2019:2). Another challenge with AI is that it is much easier for big corporations that own the online space, to exert their control not only over the technical, but also the substantial side of communications. The movement of information becomes more dependent on how Artificial Neural Networks and big corporations choose content for users, in that they can promote selected content and remove any content they believe to be unfavourable or against their standards (Kushchu & Demirel, 2020:58).

Recently, some AI challenges such as fairness, ethics, and robustness have been reported during the development of intelligent systems. As the usage of intelligent systems increases, the number of new challenges are also bound to increase (Saghiri et al., 2022:1).

Moreover, notwithstanding some remarkable successes and an ever-expanding presence in everyday life, AI frequently suffers from overselling, which leads to multiple issues. The overselling of AI can create unrealistic expectations and the perception that it is a cure-all to everyday societal problems rather than a tool to support positive change (Holmes et al., 2022:17). The Gauteng Department of Education Online Admissions Application System, for example, went live in April 2016 and suffered technical failure because of the high volume of applications. The enrolment process had to be suspended for 48 hours (OECD, 2023).

RECOMMENDATIONS

Several international scholars have argued for a multidisciplinary approach to strategic communication, with some references made to the need for a transdisciplinary focus to address both the diverse contexts involved, and the demands of an interconnected society (Benecke et al., 2021). There is a growing number of big multinational organisations planning to roll out AI solutions by 2025 (Kaczmarek-Śliwińska, 2019:65). This directly impacts on the multidisciplinary scope of strategic communication studies in organisations. The multidisciplinary approach in strategic communication has long been about revealing commonalities in various disciplines to understand how research in these different disciplines inform academic and professionals alike on communicating deliberately (Holtzhausen & Zerfass, 2013:74). In line with the multidisciplinary approach, this article proposes that future research be undertaken on *examining how organisations can leverage on AI tools to collect and analyse data and respond to stakeholders' concerns in real time.*

Commonly, the multidisciplinary approach in strategic communication research has mostly been

about the fields of Public Relations, Marketing Communication and Organisational Communication. The recommendation of this paper is that multidisciplinarity in strategic communication should consider the effect of AI on the field, hence the proposition of a future research topic on *the evaluation of the role of AI-powered chatbots in improving stakeholder engagement*. Considering the discussion on the AI implications for strategic communication, the integration of AI in strategic communication research becomes important for holistic organisational research in strategic communication.

Moreover, the easy creation and circulation of content in this digital age necessitates that the role of strategic communication practitioners evolve. They need to anticipate, work towards collaboration and co-creation with stakeholders. Strategic communication practitioners used to spend time preparing messages that are favouring their organisation's mission and deciding on which communication channels to distribute these carefully developed messages. The above discussion of the implications of AI for strategic communication demonstrated that AI technologies have compelled the role of a strategic communication practitioner to transform as well.

In this digital age, any person with access to a communication platform, such as social media, can be seen as a strategic communication practitioner, because the person can create their own content informed by their experience or interpretation of any information. Moreover, the more sensational the type of content, the easier it circulates and attracts the attention of audiences (Nayager, 2021). Strategic communication practitioners should be equipped with deep knowledge of technology gadgets and the constantly changing social media platforms and familiarise themselves with technology-driven emerging roles in organisations. As Benecke et al., (2021) put it, technology is often seen as a panacea for communication and is mooted as a driver of innovative communication solutions. It is therefore important for future research to examine the effectiveness of AI-driven communication strategies during crisis situations. The proposed potential future research areas suggest a starting point for exploring the complex relationship between AI and strategic communication. Multidisciplinary researchers can then search deeper into these areas to address the challenges and opportunities presented by AI technologies and the emerging strategic communication field.

CONCLUSION

The flood of new technologies in the strategic communication field comes with new realities and complexities which necessitates a change of mind and broadening of the scope of the field. AI offers another paradigmatic lens through which to understand and examine strategic communication practice. The discussion on AI's implication for strategic communication explored several variations that strategic communication scholars need to consider when they think and how they think about strategic communication.

This article has identified AI's role in stakeholder engagement, communication campaigns, dialogue and the automation of services. AI approaches have demonstrated that the field is multidimensional and cuts across different fields of study.

AI comprises a set of technologies that have completely transformed the nature of organisational leadership. Several strategic communication-related tasks have been automated. AI systems have improved the way dialogue, communication campaining, stakeholder engagement, citizens' participation and customer liaison in most organisations are conducted. The systems are providing new platforms for stakeholders and citizens to assess the quality, adequacy, and effectiveness of services organisations provide.

Most significantly, the article has highlighted that AI carries the necessary technology to enhance strategic communication and the broader field of public relations, automation of tasks being a leading AI tool in this field. AI challenges have also been identified and discussed.

AI is relevant not only to the field of strategic communication, but to any intellectual task; in this sense, AI positions itself as a truly universal field.

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